THE WORLD'S A MAGAZINE

SH
BEGINN
GUIDE INS

AMIGA FORMAT

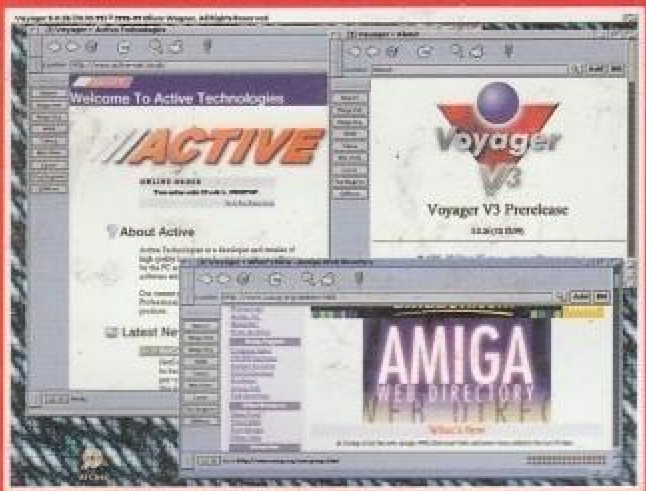
■ ISSUE 131 CD AND DD VERSIONS AVAILABLE

Hand held Amigas?

Amiga-friendly PDAs put to the test – p24

NetConnect 3

Why you can't afford to miss this fantastic Internet suite!


Welcome To Active Technologies
ACTIVE
About Active
Latest Ne
Voyager V3
Voyager V3 Prerelease
AMIGA
WEB DIRECTORY

ALSO INSIDE:

PFS3 – Faster, more stable?
Virtual GP – Vroom vroom
BMON – Switch that monitor
FAQs – Alan Redhouse
Tutorials – All the info!
Solution – Wasted Dreams

PLUS:

Reader Games, Mailbag, Workbench, afb and more!

TiMBERRR!!

How stable is your Amiga? Keep it rock steady with our guid

Exclusive! OS 3.5 First full review

AMIGA FORMAT
FloppyFlux
EvenMore
VersCheck
Xoper
AMIGA FORMAT

DDs:

Change the way you look at things with EvenMore, Xoper

AMIGA Forty Seven
PURE BASIC DEMO
Try out this easy-to-use language
YAM EXPANSION
Do more with the freeware mailer
MAP & TABLEPLUG
Stress-free web page creation
EUROBURN
clickBOOM's new game revealed
All the best new software

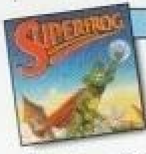
AFCD47:

Watch a fantastic trailer, create cool web pages, learn a language and more.

Future PUBLISHING
Your Guarantee
CD CHRISTMAS 1999 £5.

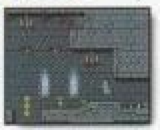
CD GAMES

BUY 3 GET A 4th FREE!



SUPERFROG

He's Back! One of the most requested games of all time. Platform action like no other game. Rated over 90% in Amiga Format Suitable for all the family!



Amiga with CD or CD32 minimum: 2mb ram
Order: CD848C £15.00

SIXTH SENSE

Arcade adventure, featuring 32 locations, full character dialog, 3 different worlds, many interactive characters, puzzles and more. Available on floppy disk or CD.

AGA Amiga CD recommended: 4mb + HD
Order: CD430C £15.00

ZOMBIE MASSACRE

Action packed 3D "doom" clone with some seriously "bloody" graphics and gut wrenching sound effects. "Should keep any Zombie Film Addict Happy!"

AGA Amiga CD minimum: 8mb, 030 + HD
Order: CD705C £15.00

SHADOW

SHADOW OF THE 3rd MOON
3D flight-simulator featuring State of the Art graphics, sound and animation..*Highly Rated Worldwide!*

AGA Amiga with CD minimum: 8mb, 030 + HD
Order: CD562C £15.00

PHEONIX FIGHTERS

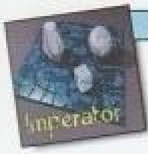
Any Amiga with CD-ROM minimum: 2mb ram
Order: CD894C £15.00

Thrust brought into the 21st Century. 200 Levels, 50fps fast action, 128 colours on-screen, 15 different weapons, Ship Upgrade path, Ship Races, Dogfights and more...
A classic "old school" arcade game!

LABYRINTH OF TIME

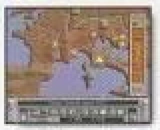
A surreal adventure with stunning hi-res graphics to convey a brilliant sense of atmosphere. Features hundreds of locations, stunning graphics, music & sound fx.

AGA Amiga with CD minimum: 2mb ram + HD
Order: CD613C £15.00



IMPERATOR

Fight your way to the top of the Roman Empire in this new strategy simulation. 28 different barbaric armies, up to 3 players. Re live ancient times.



Amiga with CD minimum: 2mb ram + HD
Order: CD929C £15.00

THE PROPHET*

Features over **200,000 locations** with over 50 different types of location. There is no fixed route through the game. Full graphical display of your character showing the different armour worn and weapons held. There's dozens of different items, Keys, food, potions and spells. Loads of fantastic monsters to face. *What all RPG addicts have been waiting for.*

Amiga with CD minimum: 2mb ram + HD
Order: CD860D £20.00

*This CD cannot be chosen as the free title.

BUY 3 GET A 4th FREE!

EAT THE WHISTLE

Farcical, Arcade and Simulation modes. Full spoken commentry, 30 pitch conditions, All 32 World Cup teams.
Optimised PPC Patch available!

AGA AmigaCD minimum: 6mb,030 +HD
Order: CD679B £10.00

DOOM D-1000

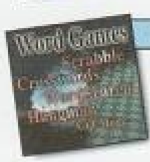
Requires: Doom2 minimum: 6mb ram
Order: CD796B £10.00

A staggering 1000 new levels for Doom 2. Supplied with simple to choose level requester to make it real easy to play all these levels.

JET STRIKE

AGA Amiga with CD-ROM minimum: 2mb ram
Order: CD878B £10.00

Over 200 missions, Multiplayer option, 60 types of weapon to choose from. Over 60 different aircraft - MiG29, F-22, F-117A, Spitfire & more...



WORD GAMES

Amiga with CD-ROM minimum: 2mb ram
Order: CD852B £10.00

The best collection of word games - Scrabble, Word Finder+, Wordsearch, Crossword Creator, Hangman, Crossword Solvers and "pen & paper" games.

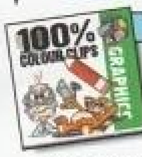
TOTAL TETRIS

AGA Amiga with CD-ROM minimum: 2mb ram
Order: CD762B £10.00

Around a hundred variations of the all-time classic game "Tetris". All the games are runnable from the CD.
Makes a great gift for anyone!

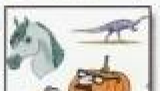
PRODUCTIVITY

BUY 3 GET A 4th FREE!



100% COLOUR

100% Colour Clips is a brand new original collection of thousands of high quality GIF and IFF clipart images. Cats, birds, office equipment, household items, trees and much more.



Any Amiga with CD-ROM minimum: 2mb ram + HD
Order: CD621B £10.00

100% MONO

Any Amiga with CD-ROM minimum: 2mb ram + HD
Order: CD622B £10.00

100% Mono Clips is a brand new original collection of over 10,000 high quality GIF and IFF clipart images. Includes Eye-catchers, Animals, Vehicles, Xmas, Symbols, Wedding art and more.

CONVERTERS

Any Amiga with CD-ROM minimum: 2mb ram + HD
Order: CD624B £10.00

Includes all you need to convert from files from one format to another. IFF, GIF, TIF, BMP, WAV, VOC, SND, MOD, TXT, DOC, WRI, PCX etc etc...

PAINT & CREATE

AGA Amiga with CD-ROM minimum: 2mb ram + HD
Order: CD882B £10.00

Features all you need to create stunning animated cartoons. Animation tools, Sound FX, Backdrops etc. *Synchronise Samples to frames of your anims.*

45,000 WEB CLIPZ

AGA Amiga with CD-ROM minimum: 2mb ram + HD
Order: CD879B £10.00

One of the largest collections of Web graphics available. Includes around 25,000 Animated Gifs and 20,000 Gifs :- *Buttons, Borders, Clips etc.*

THE MIDI FILES

Amiga with CD-ROM minimum: 2mb ram + HD
Order: CD887B £10.00

Possibly the best collection of MIDI files available- Virtually all the files are well known. From ABC to Madonna to U2 to Whitney Houston. *1000's of files...*

DESKTOP VIDEO

Amiga with CD-ROM minimum: 2mb ram + HD
Order: CD404B £10.00

Features a huge amount of quality video backdops for Scala plus a large amount of "anti-alias" fonts - Brilliant quality! Includes full version of SCALA.

WINBENCH

AGA Amiga with CD-ROM minimum: 4mb ram + HD
Order: CD880B £10.00

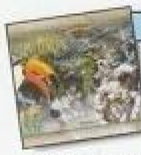
Drivers, Libraries, Patches, HD Installers, Backdrops, Commodities, Menu systems, Tools, Diagnostics, Datatypes etc.
The Definitive WB Enhancer CD.

WB ENHANCER

AGA Amiga with CD-ROM minimum: 4mb ram + HD
Order: CD187B £10.00

Over 10,000 Magic Workbench Icons and Workbench backdrops as well as many tools.
CD Includes : Magic Workbench.

REFERENCE



EPIC ENCYLOPEDIA

20,000 Articles. Features online help, hundreds of AVI film clips, images, sound samples and subject information text. A superb reference and educational title for the whole family.

AGA Amiga CD rec: 6mb, 030 + HD
Order: CD462D £20.00

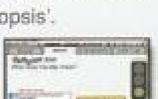
PARANORMAL

An exciting multimedia CD. ***UFOs & Aliens, Strangelife,*** and more. Masses of AVI's, and animations, hundreds of voice-overs, Presentations, Over 400 subject synopsis'.

AGA Amiga CD rec: 6mb, 030 + HD
Order: CD223C £15.00

DRIVING THEORY

KEY TO DRIVING THEORY
"KTDT" is an interactive test to aid revision of the Highway Code for learner drivers. It consists of all the latest questions.



AGA Amiga CD min: 4mb ram + HD
Order: CD672C £15.00

AMI-ATLAS 5

An exciting UK & Ireland Atlas/Route Planner. *Features:* Location to location. Unlimited stops and round traveling. Shortest, Fastest and Cheapest routes. Scalable map display. Map editor. Detailed hotel information. Overview and description of most Theme Parks and Attractions. Completely user configurable. (c)1999

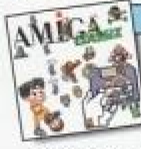
AGA Amiga CD rec: 6mb, 030 + HD
Order: CD923I £45.00

"An essential new tool for anyone taking a trip"

AVAILABLE FROM STOCK AT ALL TIMES.

CD GAMES

GREAT VALUE COMPILATIONS!



AMIGA CLASSIX

Any Amiga with CD-ROM minimum: 2mb ram + HD
Order: CD526C £15.00

This great value original CD contains over ***50 Full Games****. Take a look!* **Amegas, DNA, Testament, Charlie J. Cool, Full House Poker, PP Hammer, Starblade, Zero Gravity, Boondar** and many more. Also contained on the CD is around 300 all-time classic game-demo's.

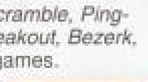
ARCADE CLASSIX

Arcade ClassiX MKII includes over 1,200 variations of all your favourite arcade games, such as *Pacman, Invaders, Tron, Galaxians , Frogger, Tempest, C64 conversions, Q-Bert, Trail Blazer, Scramble, Ping-Pong, Pengo, Missile command, Breakout, Bezerk, Donkey Kong* and tons more great games.

Any Amiga CD minimum: 2mb ram + HD
Order: CD589C £15.00

GAMES ROOM

The Games Room is an original compilation of Gambling games. It covers everything from **Fruit Machines** to **Card Games**, including **Klondike, Solitaire, Rummy, BlackJack, and Roulette, Darts, Bingo, Pool, Checkers, Chess, Backgammon, Poker, Dominoes, Various Board Games like Monopoly and Cluedo, Mastermind, Pub Quiz's** and more...



Any Amiga CD minimum: 2mb ram + HD
Order: CD451C £15.00

CDS COLLECTION

Any Amiga CD minimum: 2mb ram + HD
Order: CD854C £15.00

15 Full Games - Every available game that CDS has released for the Amiga. **The Times Crossword, Colossus Chess X (ECS & AGA), Daily Double Horse Racing, Centrefold Squares, Deluxe Strip Poker 1,2 & 3** plus loads of extra players, **European Superleague, Colossus Bridge 4, White Death, Jigsaw Puzzle Mania, The Sun Crossword, Steve Davis World Snooker** and more...

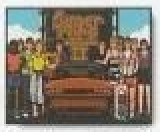
A7+

AGA Amiga with CD-ROM minimum: 2mb ram
Order: CD875B £10.00

A Brand New games collection featuring Seven Full Amiga Games :- **S*M*A*S*H, Ooze, Ant Wars2, Bazza`n`Ruint, Trap'Em, Jimmy's & RocketZ.**

BEST OF GREMLIN

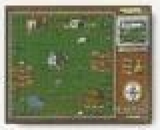
25 Full Games - Virtually Every game that Gremlin has released for the Amiga. **Artura, Butcherhill, Combo Racerm BSS Jane Seymore, HATE, Dark Fusion, Deflektor, Disposable Hero, F.O.F.T, Herlequin, Impossamole, K240, Litil Divil, Motor Massacre, Pegasus, Plan9, Premier Manager1,2&3, PM3MultiEdit, Shadow Fighter, Skidz, Super Cars1&2, Switchblade1&2, Super Scramble, Techno Cop, Top Gear2, Utopia, Vampires Empire Venus Flytrap, Video Kid, Zool and Zool2**.



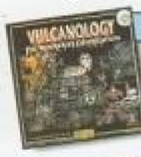
Any Amiga with CD-ROM rec: Extra ram + HD
Order: CD856F £30.00

ISLONA COLLECTION

10 Full Games - Virtually all the original *Islona* floppy based games on one CD. **Testament, Blockhead, Blockhead2, Cygnus 8, Mobile Warfare, Abduction, World Golf, Marbleous, Lost On Parrot Island,** and **Virtual Karting 2 CD** Free!



Any Amiga with CD-ROM rec: Extra ram + HD
Order: CD855E £25.00



VULCANOLOGY

AGA Amiga with CD-ROM minimum: 2mb ram
Order: CD795B £15.00

Contains all ten of Vulcan's "mini series" games. **Jet Pilot, Burnout, Tiny Troops, Time Keepers 1&2, Bograts, Hillsea Lido & Valhalla 1, 2 & 3**.

MUTANTOLOGY

A new games collection containing 10 full games: **Tin Toy Adventure** - A slick and addictive platform game, **Castle Kingdoms** - A game of battle, magic and adventure, set in a land of monsters & treasure. And **Tommy Gun** - A complete bonkers "Point Blank" style of game. ***PLUS*** Seven other snazzy action games!

AGA Amiga CD minimum: 2mb ram
Order: CD925C £15.00

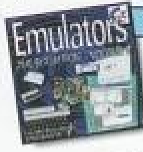
ADVENTJRER'S LAIR

Features 10 full Adventure/RPG games: **Legend of the Elves, Federation:-** ***Space Adventure*****, Blood Fest, 7 Realms, Lost On Parrot Island, Dungeon Hero, Child Murderer, Mad House, Total Species and Legends of Lothian.**
Also features a huge database of Solutions for dozens of Amiga Adventure games.

AGA Amiga CD

EMULATORS

BUY 3 GET A 4th FREE!



FLASHROM 2

Amiga with CD-RO minimum: 2mb ram +
Order: CD623B £1

The Emulators Archive: Hundreds of Emulators covering, C64, Spectrum, C16, Amstrad, Atari ST, BBC, C16 an loads more.

SPECCY 3000

Amiga with CD-RO minimum: 2mb ram +
Order: CD888B £1

Play over 3000 Classic Spectrum Games on you Amiga, Includes the latest Amiga emulators and thousands of Games.

MSX NOSTALGIA

AGA Amiga with CD-R minimum: 4mb ram +
Order: CD673B £1

Includes over 500 original MSX games all ready to r through the latest MSX software emulator. Games include origina arcade versions of Mappy, Zaxx Nemesis, and the classic, Galaga and more.

C64 CLASSIX

AGA Amiga with CD-R minimum: 8mb ram +
Order: CD707B £1

Play over 3000 Classic full Commodore 64 game on your Amiga. Includes the lates C64 Amiga emulators and thousands of original full Games Easy to use menu system!

CPC CLASSIX

AGA Amiga with CD-R minimum: 4mb ram +
Order: CD703B £1

Hundreds of retro Amstrad CPC games on your Amiga. Includes the latest easy t use CPC Amiga emulator.

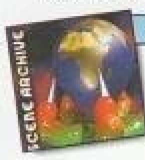
PUBLIC DOMAIN

BUY 2 GET A 3rd FREE!

EPIC COLLECTION

Amiga with CD-RO minimum: 2mb ra
Order: CD408B £1

The Epic Collection Volume3 features well over 600m of the very best Amiga games, tools, images and music. It also contains over 80 disks of educational software.



SCENE ARCHIVE

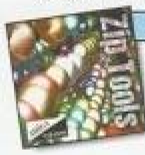
Amiga with CD-RO minimum: 2mb ra
Order: CD811B £1

Virtually every mega-demo ever made on the Amiga. From 1988 to the end of 1998. Each year/style is separat so finding a particular demo is easy and most run direct from the CD.

17BIT LEVEL 6

Amiga with CD-RO minimum: 2mb ra
Order: CD495B £1

The very latest 17BIT disks. All the best titles are here. Through an easy to use interface you have access to around 1000 brand new Amiga disks, most not available on any other CD.



ZIP TOOLS

Amiga with CD-RO minimum: 4mb ram +
Order: CD870B £1

Own a Zip or Jazz Drive? - This CD contains all you need. Store 200mb on a 100mb Zip. Read and Write Amiga, Mac & PC Zip Disks and more...

DEVELOPMENT

BLITZ BASIC

AGA Amiga with CD-R minimum: 2mb ra
Order: CD500C £1

BLITZ BASIC 2.1
A next generation BASIC with features borrowed from PASCAL, C and others. Contains the comple series of Blitz User

AMI-DEVROM

Amiga with CD-RO minimum: 2mb ra
Order: CD807B £1

A unique collection of development tools and documentation. Includes GNU C++. Not o that but also Amiga E and sourc code for Blitz, E, C++ etc...

AREXX FOR BEGINNERS - The complete ARex reference manuals, Arexx Tutorial and Arexx Beginners guide with many examples...
Amiga with CD-ROM. Minimum: 2mb ram ***Order: CD926B £1***

MISC CD-ROMS

CHEATZ

Amiga with CD-RO minimum: 4mb ram +
Order: CD851B £1

Huge collection of Amiga Hints, Walk-through's, Tips and Cheats available. This CD features guides to over 10,000 Amiga Games. All access able through Amiga Guides on the CD.

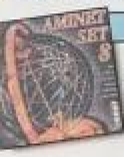
PATCHEZ

Amiga with CD-RO minimum: 4mb ram +
Order: CD847B £1

Largest collection of Hard Drive installers available. Contains thousands of Hard disk

AMINET CD'S

BUY 2 AND GET UK P&P FREE!



AMINET SET 8

Amiga with CD-ROM minimum: 2mb ram + HD
Order: CD886F £30.00

Includes full versions of CygnusED, Art Effect and Directory Opus5.5. Over 4gig of new software. 600mb never before released on any CD.

ach Set Includes 4 CD's each with over 3gig of Software! £30 each.

MINET SET 4 *Includes full Directory Opus 5*
MINET SET 5 *Includes full Octamed Sound Studio*
MINET SET 6 *Full Wordworth 5, TurboCalc3.5*
MINET SET 7 *Full Picture Manager4, XiPaint4*

on't Know what Aminet is? Order the Aminet Sampler CD. Only £5 (CD895A)

CABLES ETC

miga - 1084/Philips Monitor (Please state)	£12.99
miga - Scart TV / Monitor	£12.99
ual Joystick/Mouse Extension	£3.99
miga - Amiga Parallel Networking	£14.99
miga - Amiga or PC Serial Network	£12.99
miga TV RF Cable	£2.99
oystick Splitter lead	£3.99
oystick Extension Cable (2metres)	£3.99
miga A600/A1200 Joysick/Mouse Port	£9.99
miga - PC Linkup (Parallel)	£17.99
miga 4 Player Adaptor	£9.99
nalogue Joystick Adaptor	£9.99
rinter Cable	£3.99
600/A1200 to 3.5" Harddrive (44pin - 40pin)	£19.99
5" Harddrive cable (5cm)	£9.99
emale Jack to 2 Phono (Audio Adaptor)	£3.99
miga - Amstrad CPC Monitor (6pin)	£9.99
miga - Amstrad CPC + Monitor (8pin)	£14.99
miga - MicroVitec (6pin)	£14.99

ESSENTIAL

1200 HARD DRIVE PREP & INSTALLER	£7
ORKBENCH3.1 SET	£15
ORKBENCH3.0 SET	£10
ORKBENCH2.x SET	£10
ORKBENCH1.3 SET	£8
APPO/ARCHOS/Q-DRIVE CD SOFTWARE	£7
0 MISC. PRINTER DRIVERS	£3
EW PRINTER DRIVERS	£5
PSON PRINT UTILITY (Drivers for most Stylus')	£5
QUIRREL SCSI CD-ROM SOFTWARE	£5
AME BOOTER - Run old games on A1200	£3
1200 DEGRADER	£2

WORKBENCH 3.0
Includes Workbench, Storage, Extra's, Locale,Fonts and Install3.0. A bargain at just £9.99

MERCHANDISE

miga Dust Cover (State Model)	£2.99
miga Logo Disk/CreditCard Wallets	£1.99
miga Boing! Mouse Mat	£3.99
fficial Amiga Mouse & Mat	£9.99
eep The Momentum Going (Amiga Theme CD2)	£5.99
miga Sports Socks (White with Boing! Logo)	£5.99

ADULT

HOT HOUSE WIVES

AGA Amiga with CD-ROM minimum: 2mb ram
Order: XCD592 £15.00

A huge collection of amateur photographs of REAL women. *Just what do they get up to during the day?* Only Suitable for Adults....

DULT SENSATION 5(xcd567) - 30 Games
AGE 3 GIRLS(xcd548) - Around 700 Adult Images
NIME BABES SE(xcd491) - 3,000 Manga Pictures
UBBERAMA(xcd553) - Hundred's of Images
UST 18(xcd282) - Around 600 Adult Pix
EADERS WIVES 2(xcd727) - Around 500 Pix
SIAN BABES(xcd294) - Around 600 Asians
EENAGE DREAMS(xcd711) - Around 500 Pix
MATUER ACTION(xcd728) - Around 500 Pix
UNGEON EROTICA(xcd529) - Around 600 Adult Pix

ALL £15 each - Buy 3 and get the 4th FREE!!!

ADULT CATALOGUE AVAILABLE

*Call 0906 55 31900**

Order an adult catalogue on this line and you'll be sent a complete Adult CD-ROM and Video Catalogue as well as ***2 Adult CD's FREE.***

*State you are over 18 when ordering *(£1 a minute) State: Amiga when ordering.*

PERIPHERALS

Any Single Joystick ~~or Pad~~ Only £10 Any 2 for Just £15

CRUISER JOYSTICK

ZIP-STICK

ANY JOYSTICK £10
ANY 2 FOR JUST £15

COMPETITION PRO
MINI or STANTARD

MORE AMIGA PERIPHERALS

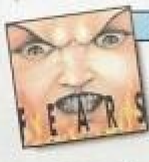
OFFICIAL AMIGA MOUSE
High quality 400dpi "official" mouse with mouse mat.

Order: ***AM01x*** *(Mouse & Mat) £9.99*
Order: ***Boing*** *(Mat Only) £3.99*

VGA MONITOR ADAPTOR
Plugs into your Monitor port and allows use of any SVGA PC monitor on the Amiga. *WB3 req.*
Order: VGA £14.99

MOUSE IT
Plug virtually any PC serial mouse, trackball or Pen into your Amiga.
Order: MouseIT £4.99

CD32 GAMES



FEARS

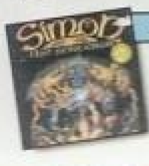
AGA Amiga with CD-ROM or CD32 Console
Order: CD927B £10.00

Possibly one of the Amiga's most impressive and in-depth "Doom" clones available. Stunning 256 colour graphics and seriously atmospheric sound.

ROADKILL

AGA Amiga with CD-ROM or CD32 Console
Order: CD928B £10.00

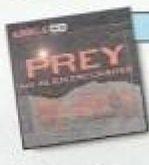
Smash & Blast your way around numerous city-scapes in this all action "birds-eye" Blaster. Polished 256 colour, 50 frames/sec scrolling and animation.



SIMON SORCERER

AGA Amiga with CD-ROM or CD32 Console
Order: CD808B £10.00

A true classic adventure. An essential purchase for every Amiga owner. Stunning hand-drawn graphics and "spoken" dialog throughout the whole game.

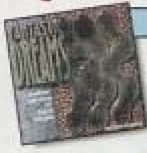


PREY: Alien Encounter

AGA Amiga with CD-ROM or CD32 Console
Order: CD930B £10.00

Explore the huge space station and listen to 'live' radio communications. Fully rendered slick 3D game. "True Ridley Scott atmosphere" *Rated 91%*

PRODUCTIVITY



FANTASTIC DREAMS

Amiga with RTG or AGA 68k or PPC, 16mb ram
Order: CD798L £60.00

A far more advanced version of the top rated "Elastic Dreams", Now includes FunRoom containing 500 premade clips, like eyes, noses etc.

CANDY FACTORY

Amiga with RTG or AGA 68k or PPC, 16mb ram
Order: CD797G £35.00

Take any common Amiga font and create a impressive looking logo with light reflections, bump mapping, textures etc.. **Rated 92%**

GOLD CARD

The New Epic Gold Card

Request one when you order and save today!

What you'll get...
Exclusive Gold Club CD
20% OFF your order, Today!
Regular Catalogues & Offers
Use our "EasyOrder" system and save time.
Upto 20% OFF future purchases

Request your Gold Card Now. Only £10

CD GAMES

ORDERS NOW BEING TAKEN

SHOGO

SHOGO: Mobile Combat Armor

- Choose from four ultra powerful transforming Mobile Combat Armor suits.
- Multiple Play Modes
- Pilot your MCA through : deadly outdoor, underground, and city missions.
- Cutting Edge 3D with LithTech- one of the most advanced next-generation 3D engines in gaming.
- Wield over 20 incredibe weapons.
- Immersive Gameplay
- Gripping story, characters you will grow to love or hate.
- Awesome Audio
- Take on your friends via modem, network and internet play!

Amiga with RTG or AGA Minimum: 16mb, PPC + HD
Order: CD921F £30.00

HERETIC 2

Beginning many years after the original Heretic, Heretic II sets you upon an epic quest across an entire continent to find a means to cleanse a world infected with a deadly magical plague that has victimized the people of the realm. As Corvus, you perform a variety of acrobatic, swimming and climbing maneuvers in order to penetrate the mystery of the plague. "Tomb Raider, Who needs it!"

Amiga with RTG or AGA Minimum: 16mb, PPC + HD
Order: CD922F £30.00

TALES FROM HEAVEN

Tales From Heaven, the first Mario N64 clone for the Amiga! Play with Zak among 4 worlds full of enemies, treasures, surprises.

- RTG Compatible.
- 68040 and 68060 optimized.
- 4 Worlds with 4 levels each.
- Superb high speed 3D engine
- Full 360 degree 3D Action
- Audio tracks and stereo sound FX
- Joypad, Keyboard and Mouse.

AGA or RTG Amiga with CD-ROM Minimum: 8mb, 030 + HD
Order: CD904E £25.00

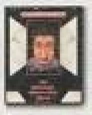
WIPEOUT 2097

It has finally arrived. The Playstation™ smash hit is now available for the Amiga.

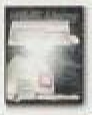
AGA Amiga CD 16mb, PPC + HD + RTG
Order: CD943F £30.00

APPLICATIONS

PRO MIDI INTERFACE
Connects to your serial port and offers in/out & through ports.
Order: PROMIDI £24.99



MEGA-LO SOUND SAMPLER
High quality 8bit Direct to Disk/Ram sampler. Suitable for use on any Amiga.
Order: MEGALO £34.99



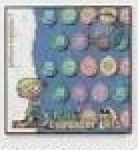
AMI-PC LINKUP
Make use of the PC's CD-ROM drive, Zip HD Floppy etc. Great for transfering files.
Order: AMI-PC LINKUP ***New Price £14.99***

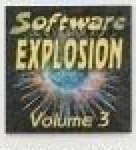
TURBO PRINT 7
Get the highest quality print from ALL the latest printers. (Inc Epson 440/740 etc)
Order: TP7 £39.99

OXYRON PATCHER
The essential patcher for all 040 and 060 accelerator owners.
Order: OXYPATCHER ***New Price £14.99***

FREE

CHOOSE 1 CD FREE WHEN YOU SPEND £30 OR MORE





SOFTWARE EXPLOSION Volumes 1, 2 or 3

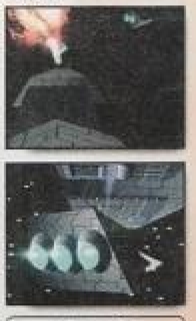
CD GAMES

THE HOTTEST NEW RELEASES

STAR FIGHTER

Star Fighter D'Yammens Reign is an exciting new 3D Space Combat Simulation.

- 110 Missions to choose from.
- Sampled speech throughout
- Lens flare from local sun.
- Direct from disc audio tracks
- Digitised explosions.
- Interactive talkback radio - you direct the action!
- Fully rendered, full motion cutscenes
- Choose from 8 fighter craft - stunt ships, and cruisers.
- Choose your allegiance. Be the Good guys or the Bad!
- Save your Full Campaign progress.
- Arcade or Simulation mode.
- 3D space combat action.



Amiga with CD Minimum: 8mb, 030 + HD
Order: CD704D £20.00

VIRTUAL GP

It's finally arrived :- The Amiga's most realistic Formula 1 Racing Simulation. Unbelievably smooth 3D texture-mapped graphics. *Optimised for 040/060*

- 16 tracks, 22 cars
- Full texture-mapped, gouraud-shaded 3D engine. Gfx-boards supported.
- Full in-game Commentary & Speech.
- Very detailed car specs...
- Improved Artificial Inteligence of opponents to make the race thrilling.
- Support for mouse, digital and analogue; simplified car control method using digital.
- Instant Replay, to see your favourite car passing, crash, tail-head, etc.
- 6 different camera views, featuring the VirtualCockpit system: inside car, just-behind, far-behind, 360 degrees, track camera. Possibility to see every different car with every camera view.
- Full multitasking.

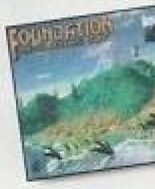
Amiga with CD Minimum: 8mb, 030 + HD
Order: CD626D £20.00

ANIMAL KINGDOM

Bertie's Animal Kingdom is an Animal recognition game designed for **nursery,** and **pre-school children.**

In the game the child is helped along by a cartoon character called "Bertie" He gives them a task to perform, tells them what to do, and when the task is complete he tells them how well they did. Each question answered correctly will award them 1-3 gold stars which are shown at all times in the top left of the screen. This is to encourage them to beat this score with each new attempt.

Amiga with CD-ROM Minimum: 2mb + HD
Order: CD905B £10.00

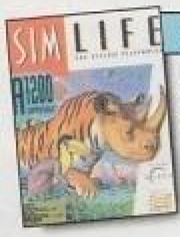


FOUNDATION DC

'Foundation DC' is a real-time strategy war game which incorporates familiar strategy elements with interesting new concepts.

- Full CyberGraphX, P96 & AHI.
- AGA Supported with fast new c2p, so AGA looks identical to RTG.
- New Rendering System.
- Faster Gameplay.
- Support for custom speech.
- Improved AI system.

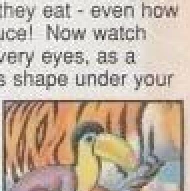
AGA Amiga with CD-ROM Minimum: 8mb + HD, 030 rec.
Order: CD901C £15.00



SIM LIFE

In Sim Life take the challenge of our inbuilt scenarios or create your own unique world where your imagination can run riot. Design plants and animales, then deside how they act, how (even who) they eat - even how they reproduce! Now watch the world evolve in front of your very eyes, as a completely new enviroment takes shape under your command. Will you be responsible for a tropical paradise, an arctic wasteland - or a planet inhabited with even stranger creatures than this one? .

More than a game.
It's evolutionary
Optimized for more ram and better processors.



AGA Amiga (Supplied on Disk) Minimum: 4mb, HD
Sim Life oem £9.99

epic marketing
Innovative and Original
Ten Years with the Amiga!
www.epicmarketing.ltd.net

08700 110013

Enquiries: 0 1793 514188 *Fax:* 0 1793 514187
Catalogue Requests: 0906 553 1900
Calls to this number should last around a minute and cost about £1.00

Open Mon - Fri
9:30am - 5:30pm
and Saturday Mornings

CREDIT CARD ORDERS WELCOME

on. SN2 2PJ, UK

POSTAGE
UK: £2.95 per order *(Software & Peripherals)*. **Overseas:** £5 per order.
"Large Hardware" delivery in the UK: between £5 - £10 (call for price) ***Minimum Order £5***

All items are sold subject to our normal terms and conditions and are subject to availability.
*Free Software is only offered on Software purchases, and only sent at the time of ordering.
Titles have been tested on A1200 based Amiga's, call for compatibility of A500 etc.
AGA = A1200/A4000 required oem = unboxed. A catalogue is sent with all orders.
When ordering please state product code, title and price.
Credit card orders are normally dispatched within 48 hours. E&OE. All prices include VAT.
Cheques and Postal Orders should be made payable to **EPIC Marketing.**

Gasteiner

6000
FAX 0181 345 6868
email sales@gasteiner.com

UK"S LOWEST PRICES

Printers

Epson 460	£99
Epson 660	£115
Epson 760	£159
Epson 750	£177
Epson 800	£132
Epson 860	£207
Epson 900	£142
Epson 1200	£299
Epson 1200	£299
Epson 1520	£319
Epson 3000	£1289

Storage

2-1/2" 810mb IDE HDD	£69
2-1/2" 1.4 GIG IDE HDD	£79
2-1/2" 3.2 GIG IDE HDD	£99
3-1/2" 3.2 GIG IDE HDD	£79
3-1/2" 4.2 GIG IDE HDD	£89
3-1/2" 4.5 GIG SCSI HDD	£149
3-1/2" 9.0 GIG SCSI HDD	£349
cdr 4*4*16 CDR	£265
YAMAHA 4*4*16	£269
ZIP 100	£75
ZIP 250	£125
JAZZ 2GIG	£239

ALL HDD'S COMPLETE WITH SOFTWARE & CABLES

Scanners

Epson Gt7000	£147
Epson Gt7000USB	£129
Epson Gt7000PHOTO	£210
Epson Gt9500	£259
Epson Gt9600	£429
Epson Gt12000	£1315
Epson FILMSCAN 200	£190

Memory

30 Pin SIMM	
4MB	£9
8MB	£26
16MB	£49

72 Pin SIMM	
4MB	£6
8MB	£12
16MB	£20
32MB	£44

COMMS

PACE 56K EXT	£94
GENERIC 56K EX	£69
USR 56K	£99

CD-ROMS

PANASONIC PC FLOPPY DRIVE	£12
CD-ROMS------BARE	
36 IDE	£23
48 IDE	£30

Needs cables & software

Monitors

Formac

GASTEINER

Gasteiner 14"	£75
Gasteiner 15"	£82
Gasteiner 17"	£150
Gasteiner 19"	£299

all monitor are with 3 years warranty

AMIGA POWER SUPPLY £19.99

33MHZ FPU £6.99

MICE

ALFA-DATA MEGA MOUSE-E
WORLDS BEST SELLING MOUSE £3.99

OFFICIAL AMIGA MOUSE 400DPI £3.99

AMIGA SCART CABLE £5.99

ScanMagic external with Flicker Fixer £75.0

TV-AMAZING.

WATCH TV ON YOUR VGA MONITOR. JUST CONNECT YOUR MONITOR THROUGH OUR EXTERNAL BOX FOR FULL SCREEN TV. INCLUDES REMOTE CONTROL+BATTERIES+ ALL CABLES

£49

Quickshot joystick	£9.99
Quickshot joypad	£9.99

www.gasteiner.com

All prices exclude VAT and delivery. Payment with order by VISA, Access, Mastercard, American Express, Switch, Delta or chequ
change without notice. Offers subject to availability. All trade marks acknowledged. E.&O.E.

AMIGA FORMAT Contents

Issue 131 **Christmas 1999**

AMIGA FORMAT
Forty
PURE BASIC DEMO Try out this easy-to-use language
YAM EXPANSION Do more with the freeware mailer
MAP & TABLEPLUG Stress-free web page creation
EUROBURN clickBOOM's new game revealed
All the best new software

AMIGA FORMAT
FloppyFlux
VersCheck
Koper
AMIGA FORMAT

76 AFCD47 AND DISKS

Engulf your senses with the senstional EuroBurn trailer, discover an easy way to program and some different ways to keep time with our CD. Or enjoy our usual mixed disks filled with mad games and handy tools to make your life easier.

KEY: 🟧Regulars 🟥Games 🟦Serious 🟩Creative 🟪Readers Stuff

Merry Xmas
from Amiga Format

18 STABILITY

Have you got a constant fault on your Amiga? Worried that you may experience a complete collapse? Sort out all your niggling problems now and regain stability so you won't need rescuing later. Simon Goodwin tells you how.

24 PDAs

Pocket Deep Amigas? Well, almost. Ben Vost compares the latest in Amiga-compatible digital assistants so you needn't be without technology, wherever you decide to roam.

14 OS 3.5

It's finally arrived, the all new, improved and final version. Find out what Ben Vost made of it all.

SCREEN PLAY

30 . . . . PREVIEWS
What you should be asking for in your letter to Father Christmas.

32 . . . . VIRTUAL GP
Is it a winner or just a flat-spinner? Oliver Roberts tells all.

34 . . . . GAMEBUSTERS
Walkthrough Wasted Dreams with ease plus all our usual tips.

36 . . . . READER GAMES
A lovely mix of home-baked games for you to digest.

SERIOUS

42 . . . . NETCONNECT3
A great new package to get you Internet-connected with style.

46 . . . . THE *MON FAMILY
Simon Goodwin investigates which is the best buy in switch units.

48 . . . . PFS3
Richard Drummond road tests the latest file system.

CREATIVE

54 . . . . . . COMPLETE BEGINNERS GUIDE TO THE SHELL
Knowledge is power so take control of your Amiga with this tutorial.

58 . . . . PRACTICAL JAVASCRIPT
Create an exciting and inviting website with Neil Bothwick.

60 . . . . USEFUL AREXX
Nick Veitch makes life easy by automating HTML coding.

62 . . . . PROGRAM PERFECTION
Don your hard hat and prepare for some serious construction work.

64 . . . . SYNTH STUDIES
Plug in NSM and get more play out of OctaMED's SoundStudio.

66 . . . . BANGING THE METAL
Discover how sprites work to make Amiga systems run smoothly.

68 . . . . AMIGA.NET
Dave Cusick takes a peek into the curious world of the webcam.

REGULARS

12 SUBS/BACK ISSUES
How to pay less for your copies of AF.

38 PD SELECT
The latest in PD software reviewed.

50 WORKBENCH
All of your technical troubles solved.

70 MAILBAG
Here's where you get to have your say.

74 GALLERY
Your work displayed for all to see.

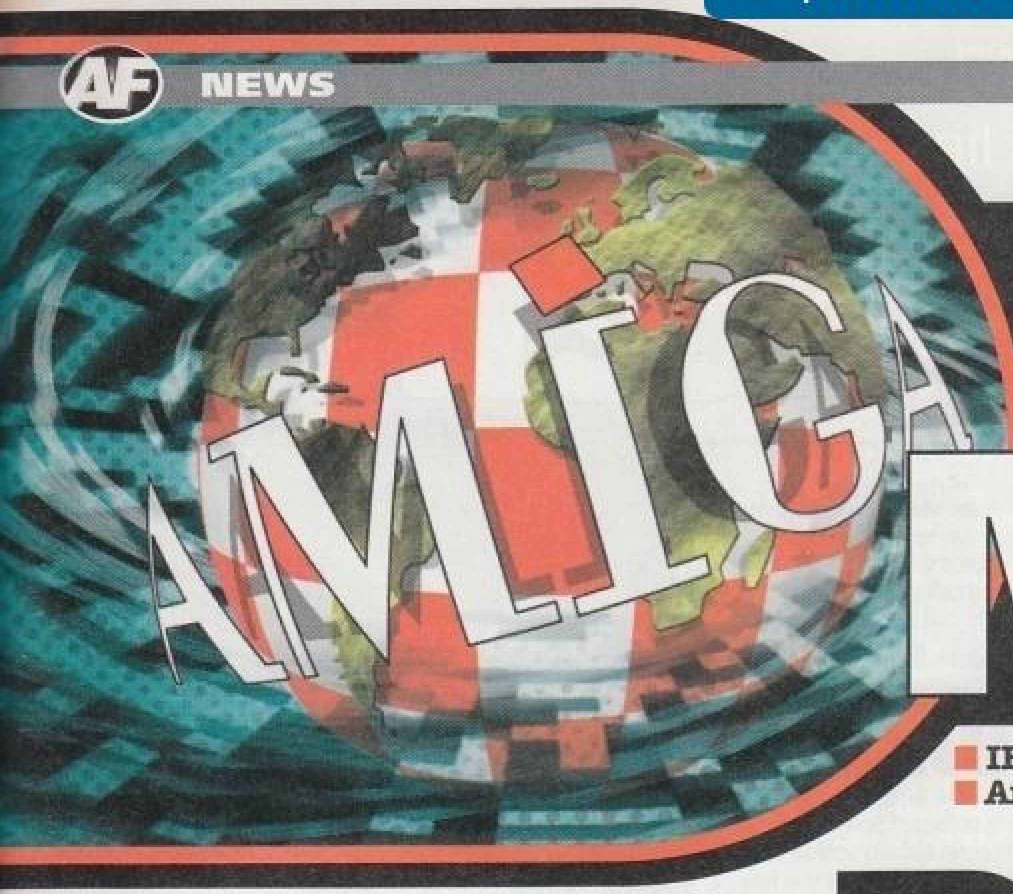
82 FREE READER ADS
A hive of buying and selling activity.

85 USER GROUPS
It's time to visit Deal Amiga Club.

86 JUST THE FAQS
We give you the Alan Redhouse file.

87 AFB
What the king of wibble thinks of afb.

Voyager - Active Technologies
Welcome To Active Technologies
ACTI
About Active
Voyager V3
PFS3
GREED
System
Shell
Format
RexxMast



WORLD NEWS

- IBM's POP design released for free
- OS3.5 sales looking good
- Amiga OS campaign in full flow
- phase 5 delay G4 cards

POP-up motherboards?

IBM recently announced that it would make its PowerPC Open Platform (POP) design freely available. Manufacturers may produce motherboards based on this design without paying a license fee to IBM.

This is obviously a move by IBM to push the PPC as a platform for Linux, but it could also be good news for Amiga owners.

A RETROSPECTIVE

The PowerPC alliance was formed in 1991 between Apple, IBM and Motorola to produce a RISC-based series of microprocessors as an alternative to Intel CPUs in the desktop. But with the exception of Apple's Macintosh line and the now discontinued BeBox, nobody has yet succeeded in pushing the PPC in this market.

There have been several attempts to create a hardware standard for PPC machines. The first was PReP (PowerPC Reference Platform), penned jointly by IBM and Motorola and which evolved into CHRP (pronounced "chirp", Common Hardware Reference Platform) when Apple joined the party. The CHRP standard was designed to run MacOS, as well as flavours of UNIX, but to do so required the MacOS boot ROMs. So as part of the deal, Apple stipulated that they had to validate any CHRP designs before manufacture. The clone makers moved in and started producing faster and cheaper machines than Apple could. Apple were losing money fast, so killed off their licensing policy and effectively killed the CHRP standard too.

PowerPC 750
IBM
PowerPC 740
IBM

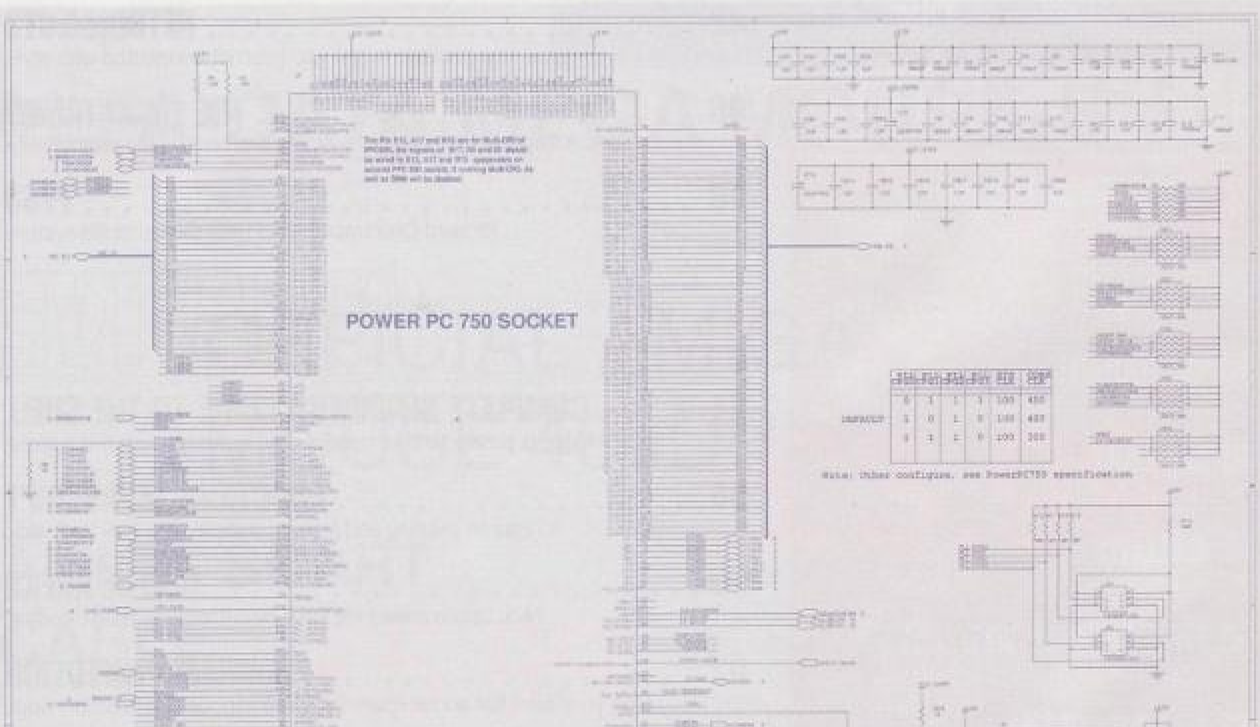
LINUX PPC?

IBM's surprise move to "open source" the POP design ties in with their current Linux strategy, a strategy that could be interpreted as IBM trying to claw back market share in a industry that it created but is now dominated by Microsoft and Intel. After all, one reason for the failure of the PPC in the desktop market is the lack of a strong operating system. The momentum and development behind Linux at the moment is such that it could soon emerge as a viable alternative to Windows on the desktop. If it does and the PPC is seen as a major Linux platform, IBM could score well.

Although there are many different Linux distributions at the moment, distributions

POP SPECIFICATION

ATX form factor motherboard
PPC 740 or 750 processor
33MHz PCI bus (3 slots)
133MHz AGP slot
4 DIMM slots (100MHz SDRAM. Max 1GB)
10/100 baseT Ethernet
Ultra DMA/33



Building your own computer could take on a whole new meaning if you get hold of the POP design.

Month in view...

This here's the bit where I usually talk about Christmas in this issue, but I ain't gonna, you can't make me. I'm not even going to talk about my highly exciting, but admittedly off-topic, holiday in Japan. Instead, as is my remit, I shall talk about some of the things going on in the Amiga world, in a biting and sarcastic manner. First on my hitlist for this issue just has to be this Phoenix "club". We haven't covered it in *Format* for one main reason – I'm 99 per cent sure it won't produce any results. In essence it seems to be a revamp of old favourite ICOA, and has already generated reams and reams of talk (when printed out) with little action. It's not necessarily their fault, but how can you take any organisation seriously, or more to the point, how can anyone outside the Amiga market, take any organisation seriously that has a leader called Greenboy? What sort of a name is that? What kind of respect do you think it'll engender from "serious" businessmen?

Second on my list for today is IWin. What really was the point? Get the Amiga folk all excited about new machines, talk up a storm on the website and then only have three people to your "press conference"? The thing I don't understand is what IWin had to gain with all this. Was it a bet, or a prank, or do they really have products to offer (that last one was a trick option).

Last and least, are the people who reckon they aren't going to buy OS3.5. Get with the plan Stan. If you don't buy it don't come whining to us when the latest software doesn't work on your machine. Its cost is less than 2p a day since you last had the opportunity to upgrade your OS, so get real and get OS3.5. Ho, ho, ho, merry Christmas.

Ben Vost

for PPC platforms are few and far between. LinuxPPC.org produce a version of RedHat for the PPC, as do newcomers, YellowDog. Debian's PPC distribution has not yet reached a stable status. It's a rather catch 22 situation. Linux is not yet popular on PPC because of the lack of hardware; PPC is not popular for the lack of an operating system. The announcement of POP could break the stalemate. The design is inexpensive as it uses off-the-shelf components. A modern G3 motherboard potentially offers more MIPs per pound than the aging x86 designs that form the basis for most Linux boxes.

WHAT'S IN IT FOR US?

Amiga users reading all this may think, so what? Well, a contributing reason for the current doldrums in the Amiga market is the lack of new hardware. There have been various announcements to build Amiga clones, but these have generally been too short-sighted. Why build a machine powered by a MC68000 series processor when it would be cheaper and easier to build a PPC one?

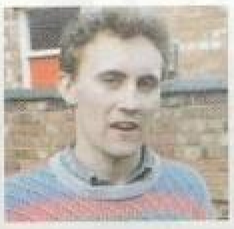
To be fair, a lack of a port of AmigaOS – or at least an Amiga-like OS – on the PPC platform has held back the migration to this processor. However, a G3- or G4-powered machine could run 68k Amiga software faster than a native machine. Haage & Partner's WarpOS is hardware independent so could run on any new hardware with ease. Throw in their 68k emulator and you have an instant new Amiga, but an Amiga with a fast AGP graphics card, DMA-33 IDE access and USB. Or, if you don't like WarpOS, you can try phase 5's solution. Or QNX. Or Linux.

Several manufacturers have already picked up on the POP design. Prophet Systems intend to sell their own version, possibly upgraded with an ATA/66 disk interface, Firewire and PCI audio. Total Impact, on the other hand, have reworked the design to support the new G4 processor. Its TotalMP technology will allow for a multiprocessing machine with up to 13 G4 processors internally.

More information and a schematic and bill of materials for the POP motherboard design is available from http://www.chips.ibm.com/products/powerpc/linux/

Free the AmigaOS?

A new campaign has been set up to persuade Amiga, Inc. to release AmigaOS under an Open Source Licence. The Campaign to Open Source AmigaOS (COSA), set up in early October, has already been in contact with Amiga president, Tom Schimdt, to put forward the case for open access to the AmigaOS source code.



(Top) Fleecy is backing open-sourcing but Holger Kruse (Above) thinks it's a bad idea.

Amiga, Inc. themselves clearly have no interest in the classic AmigaOS, so putting the source code into the public domain would not affect their current strategy. COSA further believe that an open-source AmigaOS could leverage some of the momentum that has led to the meteoric rise of Linux. Also, the OS would be free to be ported to other hardware platforms and so potentially appeal to more users, boosting the ever-shrinking Amiga market. Here, COSA could enlist the help of other projects attempting to migrate the OS to new hardware, such as the portable Amiga-compatible system, AROS.

COSA have the backing of several big names, including Open Source advocate Eric Raymond, who consulted for Netscape on the Mozilla project. Closer to home, COSA has the support of ex-Amiga employee Fleecy Moss, now a partner in Amino. Many Amiga developers are sympathetic to the cause, such as GPSoft's Greg Perry.

Not all in the Amiga community believe that open-sourcing AmigaOS is desirable or, indeed, possible. AmigaOS guru, Olaf Barthel, has said that it would be unworkable due to copyright and patent issues. A free AmigaOS would not be able to use trademark names like "Amiga", "Workbench" or "AmigaGuide". This would cause problems in the naming of vital OS components like the names of shared libraries. Also, an open source AmigaOS would not be able to include components that Commodore licensed from third parties, such as ARexx, the Agfa font engine and fonts or CrossDOS. Nordic Global's Holger Kruse, the developer of *Miami*, claims that open-sourcing AmigaOS would be a recipe for disaster. Two of the strengths of the OS are its modularity and its forwards- and backwards-compatibility, which would be broken if modifications could be freely made.

More to the point, a move to Open Source would seem unlikely at the current time, just when the first update to the OS in five years has been released. However, the OS3.5 developers, Haage & Partner, are not against an open-source AmigaOS in principle. But surely Amiga, Inc. will want to gauge sales of the new OS before making any decisions.

More information on the Campaign to Open Source AmigaOS can be found at http://www.savetheamiga.org.uk/.

Amiga OS3.5 selling well

Amiga Format can reveal that, based on information received from several sources, the sales figures for the first batch of Amiga OS3.5 sales are looking pretty good. Haage & Partner pressed five thousand copies of the new operating system, but dealers in the UK are now having to wait for a second batch to be pressed to fulfill their orders for the Workbench upgrade. It's just a start however, since the profit and loss sheet that Haage & Partner worked out indicated a minimum of 20,000 sales for the project to continue. If you haven't bought your upgrade yet, then *Amiga Format* urges you to do so, with the promise of more and more OS3.5-only software destined for our CD in coming months.

Continued overleaf ➡

The Millennium is coming...

Leaving aside questions of whether the third millennium starts next year or the year after, Nova Design have put together a very tasty package, called Millennium, for the Video Toaster/Video Flyer people in the states.

It still seems like a conspiracy that we don't have either in the UK, but there's no sign of Chris Carter, Lance Henriksen or even Oliver Stone, so I guess it was just one of those things. Still, for our NTSC-using readers, here's the lowdown on Nova Design's new package for your Amiga:

Millennium is not merely a single package. It is a collection of software, scripts, effects, fonts, backgrounds, and other content designed to update your Video Toaster and Flyer dramatically. *Millennium* was designed to be the largest, most comprehensive, upgrade you could put on your system. *Millennium* is for the Toaster owner as well as the Flyer owner.

- **Wipe Studio** – You may be familiar with the 'lite' version – but this is the complete package! Use it to create your own wipes and effects for the Toaster and Flyer.
- **RenderFX** – Upgraded for *Millennium*, this package allows you to render your FlyerClip sequences down to a new FlyerClip. You can then layer more video, CG, and effects for a far more impressive production.
- **Flyer Utilities** – Includes utilities for converting Toaster wipes between 3.x and 4.x formats, Undeleting FlyerClips, Timecoding and much more.
- **ProMix** – Also upgraded for *Millennium*, this package provides audio tools to let you add audio to video, import/export audio formats, add audio to FlyerClips and animations, and more.
- **Fast Frames** – Allows you to 'Toasterize' your Video Flyer by pre-recording CG sequences, Framestore montages, and create flying CG effects and more.
- **Fast Fuel** – Adds video deck control to the Toaster/Flyer interface for automatic clip recording.
- **Electric Scene Knife** – This can save you literally hours of work. The Knife can take a FlyerClip and automatically find the different scenes within it, mark them, and even offer to cut them into separate FlyerClips for you.

> *The Millennium package will include three CD-ROMs filled with wipes, effects, fonts, backgrounds, software as well as a full colour catalogue*

- **Flyer Backup** – A script based system that can backup your actual FlyerClips to a hard drive or to removable media.
- **CGPilot** – The famous CG ARexx scripts that automate many time consuming CG tasks.
- **Toaster Wipes and Effects** – There are hundreds of these and most are available for both Toaster 3.x and 4.x so both Toaster and Flyer owners can use them. These include wedding wipes, fire wipes, basic animated wipes, cool soft gradient wipes, and fully rotoscoped motion matte wipes.
- **MegFX** – Special wipe effects designed for the Flyer user to simulate split-screen effects.
- **Backgrounds** – Hundreds of full colour, professionally drawn, backgrounds for you to use in your CG pages or in ToasterPaint.
- **Full motion backgrounds** – FlyerClips of animated scenes, fire, and more. You can use these with your Flyer for CG backgrounds or as royalty-free stock footage.

There are many other features of

Phase 5 delay on G4 cards

First the bad news: phase 5 have said that there'll be a delay on the delivery of their new G4-based PPC accelerator cards. Now the good news: it's quite likely that they'll have an AGP port when they do arrive early next year.

Basically, the Motorola MPC107 system controller, which provides the on-board PCI and memory controller for the new boards, is being held up at Motorola's end, meaning that phase 5 wouldn't be able to deliver. However, as we write this phase 5 are awaiting news from Motorola as to the delivery schedule for the MPC107. If it turns out that the processor giant can't deliver the controller in quantity before the end of November, a shipment of the new G4 accelerators looks increasingly unlikely before the end of the year. However, phase 5 are also investigating another chip from a different company, one which can provide AGP (Advanced Graphics Port) support in addition to the PCI and memory functions required, but with the evaluation of this chip and the re-design of the board to take into account the accelerator will be delayed into next year anyway.

phase 5 also say that they have received enough orders of the U2W SCSI and Fast SCSI II controller add-ons for the boards to make production worthwhile, however, the Ultra DMA and IEEE 1394 (Firewire) peripherals haven't had enough orders yet to warrant the mass production of these devices. In any case, everyone who has pre-ordered their cards should receive a letter from phase 5, about the same time as this magazine, stating what's happening.

The new G4 Generation:
BLIZZARD G4
CYBERSTORM G4

100 issues ago

AF31 February 1992

AMIGA FORMAT

AMIGA FORMAT
SECRETS REVEALED! The experts show you how great games are made...
DO IT YOURSELF 11-page guide starts you going!

We look at what was going on in the Amiga market 100 issues of *AF* ago…

Cover feature: Secrets revealed! The experts show you how great games are made – a collection of interviews with famous name developers, and guides to using AMOS and the like to build your own games.

- **On the disks: One disk with a demo of *Knightmare* and various well-known utilities including John Veldthuis' *Virus Checker* and Nick Wilson's *SysInfo*.**

- **News: The three millionth Amiga gets sold, and more than one million Amigas are sold in the UK, GVP reveal that they will have add-ons for their excellent Series II hard drive controller for the A500 including the Vortex ATOnce PC emulator card, Easy AMOS is announced and the SSA (Society of Software Authors) bands together.**

- **Prices: A Citizen 120D+ (a mono 9-pin dot matrix printer) would set you back £134.99 from Technomania.**

- **Games reviewed included: *Another World* (US Gold) 82%, *Oh No! More Lemmings* (Psygnosis) 82%, *Knightmare* (Mindscape) 85%, *SmashTV* (Ocean) 61%, *Space 1889* (Empire) 59%, *Barbarian II* (Psygnosis) 73%, *AirBus A320* (Thalion) 78%**

- **Serious products reviewed: Last issue was a good one for classic games and this one was good for classic software and hardware: DCTV (Digital Creations) 90%, *DCTVPaint* (Digital Creations – comes with DCTV) 95%, *Real 3D 1.4* (Activa) 95%, *Charts & Graphs* (ASD) 65%, *Visionary* (Aegis) 65%**

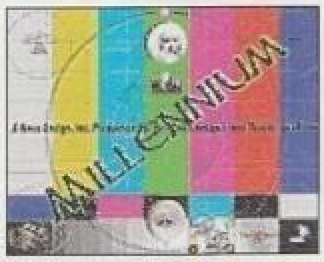
- **Notes: Video Plus+ is advertised for the first time (it cost £60 as a separate remote and not many magazines had the programming codes).**

- **Pages: 228**
- **Cost: £2.95**

...no really?

Millennium. We've really just touched the surface of all the tools and content that are included to make your Toaster and Flyer more productive for you. *Millennium* also includes hundreds of new ARexx commands for scripting, programmer's manuals for the ProMix and RenderFX tools and more.

The package will include three CD-ROMs filled with wipes, effects, fonts, backgrounds, software and more; full printed documentation, a video tape overview of the package and a comprehensive colour catalogue of other Toaster/Flyer products.



There's three CD-ROMs, a video tape and a colour catalogue in here!

Millennium should be available now. Suggested resale price is only $349.95. For more information or to order *Millennium* for the Amiga Toaster/Flyer directly, you can call 1-800-462-4369 Monday-Friday or fax (804) 282-3768.

You can also find information, and screenshots, on Newtek's website and Nova Design, Inc.'s websites at http://www.newtek.com and http://www.novadesign.com.

Product News...Product News...Product News...Product

OS3.5 – I think you'll know by now that the upgrade from OS3.1 to 3.5 is out now and you can read the review of the final release starting on page 14.

STFax 4 Demo – If you can't wait for its inclusion on our next CD you'll be able to download the demo of this fine package from Aminet right now.

samba_2.0.5a.lha – Olaf Barthel has released an Amiga-native (that is, not needing IXemul) version of Samba, the defacto standard for linking multiple machines of different platforms together.

ArtEffect 3.0.11 update – You can download this free update to ArtEffect from http://www.haage-partner.com

Digital Almanac II – Everyone who saw the original version waxed lyrical about just how good it was and version II is now available from Schatztruhe and your local dealer.

APDF1.3 – is now available and can read the encrypted PDFs supplied with OS3.5. You can find the URL on page 16.

Product News...Product News...Product News...Product

Two years of RC5-64

The Amiga RC5 Team effort has now been participating for two years in the Distributed.Net/RC5-64 challenge. During the first two years of the effort we managed to reach a ranking of fifth overall out of over 8,000 teams with a total of 200,000 participants. There are now over 2,000 people participating under the Amiga team, accounting for about 1.1 per cent of all the work done (or 110 million blocks of 2^{28} keys).

During this period, 14 per cent of the keyspace has been searched, progressing 2.5 times faster in the second year than the first. At current growth rate the correct key will be found within the next two years, whereas this was previously thought to take a century or more, clearly showing how good encryption and the free availability thereof is important to security and privacy on the Internet and elsewhere.

The Amiga RC5 Team effort focuses on bringing exposure to the Amiga and the community spirit and strives to achieve this by ranking high in distributed computing projects such as the RC5 and DES challenges, using otherwise idle computing power only.

With your help, we hope to increase our momentum and show the world the Amiga is not dead, in spite of a total lack of support from parent companies over the past five years. There is still plenty to come, with the recent release of AmigaOS 3.5, and upcoming G3 and G4 accelerators and peripherals. A G4/AltiVec-optimised client could be as much as four times faster MHz for MHz as current code, and only a few hundred people upgrading would propel us into the top three if not higher (over 660 Amigas participating in the effort are already PowerPC equipped). Also, work on an improved/faster 68K client is still progressing.

Everyone is cordially invited to join, with any kind of machine, though one Amiga at least is appreciated. For a full explanation of what the effort is about, where we are heading, how to participate and everything from statistics to member listings, please visit the Amiga RC5 Team effort homepage at http://distributed.amiga.org.

The Amiga RC5 Team effort is also providing a mailing list as a forum for the discussion on the above topics and the effort in general.

Help the Amiga Team reach the top three in the RC5 challenge.

Vital Horgan

Sometime soon we're going to see a revolution in desktop computing, but it won't be headed by Amiga. Maybe I shouldn't say it within these pages, but that's what I believe now. It looks to me as if Amiga are all at sea, drifting dangerously close to their own little Bermuda Triangle.

Take new CEO Tom Schmidt's comments in last issue's news pages: "why not have Amiga running on every type of device imaginable, on top of every other OS out there?" Do me a favour! I'll tell you why not, because it would be rubbish! That would be like building a new top floor on a derelict house. If the Amiga operating environment is going to be the computer equivalent of plastic stone cladding, I want nothing to do with it.

Every time I use a 'cutting edge' PC or Mac (which is most days) I'm repeatedly baffled as to how they manage to stall, fall asleep, crash and act so stupid when they're powered by super-fast PIII and G4 CPUs, backed up with all manner of high spec interfaces and cards. I'm sure we all feel the same, and we can't be the only ones. That's why I'm sure that someone, somewhere, is going to realise that we really do need a new dawn for desktop computing, and just like in the early days of the original Amiga project, they'll get the cash and expertise to make it happen sooner or later.

The trouble is, I just can't see that coming from Amiga, not after the way things have gone recently. It doesn't take much reading between the lines to realise that desktop computers are not what turns them on. I say let them get on with it. Let them make a fancy 'skin' for Windows that turns it into an idiot-proof TV/Internet box. Good luck to them.

Meanwhile, there must be some big IT developer willing to take a chance on re-writing the rulebook. I don't care who that is, so long as it happens (preferably within my lifetime).

Tony Horgan

Continued overleaf ➡

The New Sound Revolution

Burst your eardrums, and those of your neighbours, with a multi-media speaker system.

Want to boom, crash and blast your way through games at a deafening 300 Watts? Then the new Screenbeat Sound Station from Logic 3 is for you. It's fully compatible with your trusty Amiga and its 300 Watts sub woofer and twin satellite speakers give a new dimension to classic games such as Super Silly Skidmarks!

There's variable volume control, variable bass control, an acoustically engineered cabinet and you can also plug in your your Walkman, Discman, Mini Disc, MP3 Player or anything else you can think of. This is a system that has to be heard to be believed. Available in Stylish iMac Blueberry or classic Purple at an SRP of £49.99.

ViewSonic

ViewSonic has revealed its revolutionary VP151 and VP181 ViewPanels. These are its first 15" and 18" flat panels to incorporate digital, analogue and video inputs, allowing digitally equipped users to experience greater flexibility. It also means that you can plug in a DVD player or video camera and have a film playing in a small window on your computer monitor or on the whole screen – depending if you're supposed to be working or not!

ViewSonic's European Marketing Manager, Bharat Kumar, says "Both models give consumers the confidence to invest in a panel knowing that it will not be superseded by digital displays."

A total of five inputs are available on the VP181 and VP151 including two digital inputs, two analogue (sync on green compatible) inputs and one video input. The flat panels also support worldwide video standards including NTSC, Pal and Secam. Add to this the two integrated stereo speakers and the swivel, tilt, height-adjustment and landscape/portrait pivot functions and you've got yourself a whole new way of viewing.

The estimated street price for the ViewSonic VP151 is £1,149 excluding VAT. The VP181 will be available soon. For more information visit their website at http://www.viewsonic.com/europe or freephone 0800 833 648.

Make the world flat again with these flexible panels.

LAMÉ CD LABELS

CD labels have never been so exciting. No, honest. NEATO, a CD labelling, packaging and presentation company have created these eye-catching, metallic gold and silver CD labels to give your work a hi-tech, professional appearance.

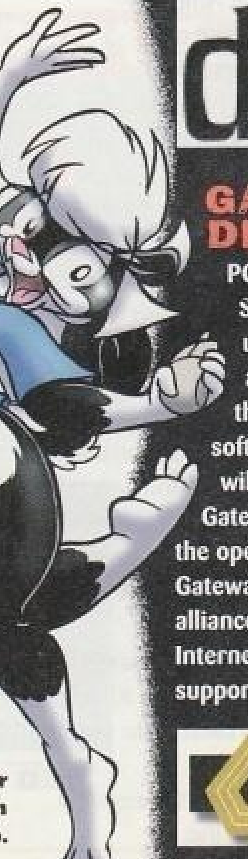
The labels are suitable for printing with virtually any laser printer and ensure crisp, high-definition images to simulate the results that would be achieved by screen printing a disc but at a far cheaper price – £14.50 for a pack of 100 or £35.95 for 300 (plus VAT).

NEATO have tested the labels to ensure they stay stuck and don't cause damage to your discs no matter how often you use them. And if you've run out of CD-ROMs to put labels on you can buy those online too at: http://www.neato.com/a4.

Make your CDs sparkle for the millennium with gold and silver labels from NEATO.

Sabrina Online

Advance warning! "Sabrina Online Year 2: The Sequel" is now available to advance order through Diamond Previews and will be available to buy in comic shops by January 2000. So, don't miss out, get down to your local comic store now and pester them to get you a copy.



Yippee! I've been hired for a second series. Now I can afford to buy trousers too.

Other news

LIGHT MY FIRE

Canon are rumoured to have demonstrated a wireless version of the Firewire interface that operates at 100Mb/s. Firewire, the trademark name for the IEEE 1394 serial standard, currently works at 400Mb/s on cable, and is currently used for connecting video equipment and fast hard disks. The new wireless version, which transmits via GHz-band radio, could give Firewire credibility as a networking standard.

THE NC IS BACK

Database giant Oracle have resurrected their failed Network Computer subsidiary to build budget-price Internet machines. The new network computer will use an x86 processor, have 64MB of RAM, run the Linux operating system and ship with Internet software. Whether it will prove any more successful than Orcale's previous attempt to displace the PC on the desktop remains to be seen.

DEBIAN GOES COMMERCIAL

Non profit-making Linux vendor Debian are to release a commercial version of their Linux distribution with the backing of SGI, VA Linux Systems and O'Reilly Associates. It will ship on CD-only for $19.95, while O'Reilly will publish a book on using the system with CDs included for $39.95. Uniquely, Debian say that all profits of this venture will go to the charity Software in the Public Interest, of which Debian is a member.

GATEWAY-AOL DEAL

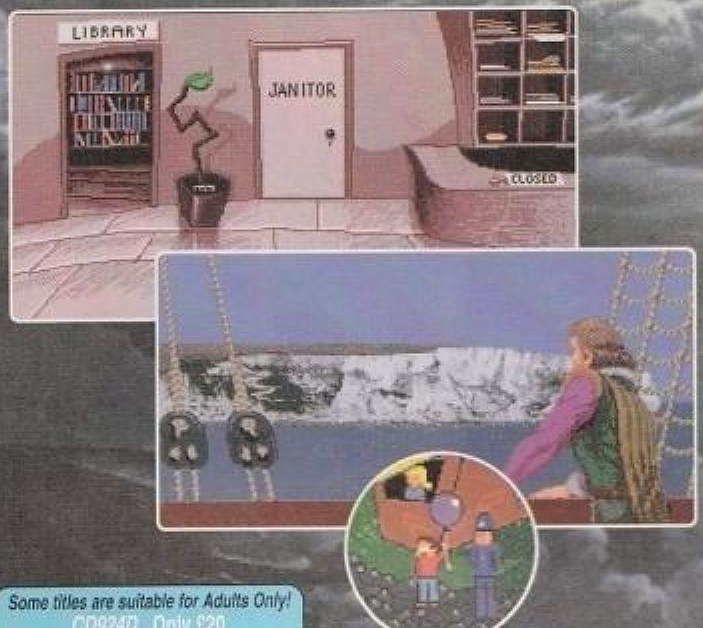
PC-box shifter, Gateway, and Internet Service Provider, AOL, have teamed up to tackle the information appliance market. The deal means that Gateway will bundle AOL software with all their PCs and AOL will become the default ISP for Gateway customers. AOL will take over the operation of Gateway's own service, Gateway.net. Also under the terms of the alliance, Gateway are to build portable Internet devices and set-top boxes to support the "AOL anywhere" strategy.

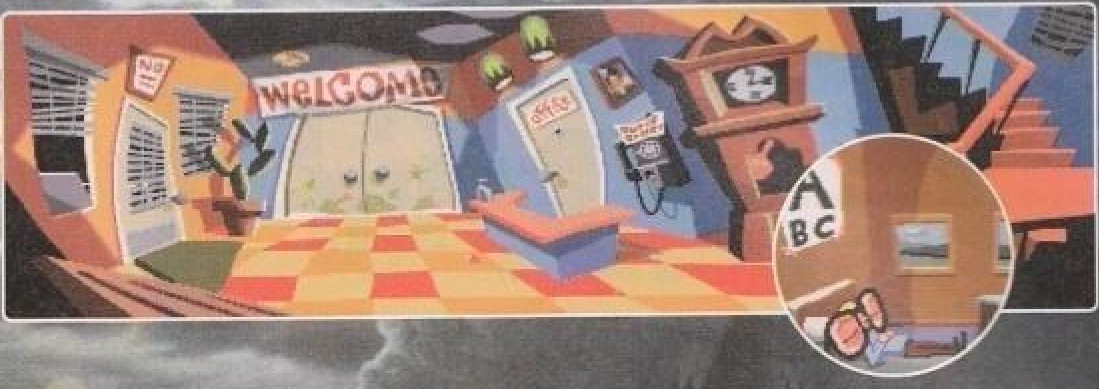
Adventurer's Lair

Adventurer's Lair

Adventure to uncharted lands, visit weird and wonderful places, meet strange and interesting people....

Join the Adventurer's Lair... ***If you dare......***





Features 10 full Graphic Adventure and RPG games: **Legend of the Elves, Federation:-** ***Space Adventure,*** **Blood Fest, 7 Realms, Lost On Parrot Island, Dungeon Hero, King Maker, Mad House, Total Species & Legends of Lothian.** Also features a huge database of solutions and walk-through's for hundreds of Amiga Adventure games.

AMIGA cd-rom

Some titles are suitable for Adults Only!
CD924D Only £20
AGA Amiga with CD-ROM Minimum: 2mb. + HD

WHALE'S VOYAGE 2

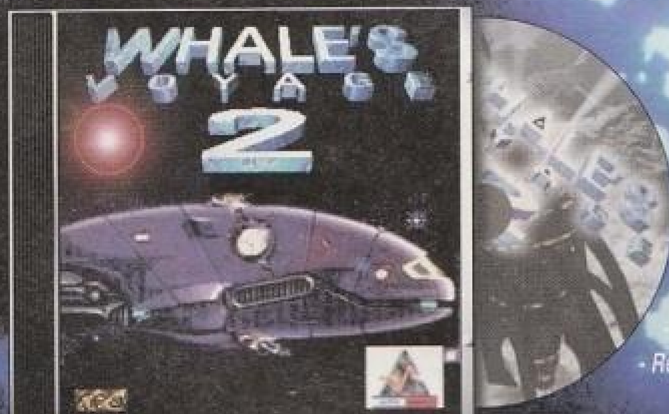
A science fiction, role-playing, strategic trading adventure.

The story so far:
After many month's of political unrest, the skyboulevard, seat of government of the aphastra-system, has been destroyed by the crew of the Whale.

... 20 years later ...

... the crew is forced to stay alive in the corrupt world of the 25th century after spending their money on leisure and fun.

Whales Voyage 2 offers a lot of excitement which surpasses any other game in this style. From the beginning the player gets directly involved into the highly detailed story which evolves into a whole new and exciting way of game-play.



- *Full in-game Speech*
- *Stunning 3D textured graphics*
- *Complex Strategic gameplay*
- *Amazing cut sequences*
- *Professional audio tracks*
- *Rendered 3D "doom" style elements*

Whales Voyage 2 includes an abundance of high quality sound effects, music, stunning graphics and of course full in-game speech.

"Whales Voyage 2" will become one of the most complex games of the year, which combines role playing, trading simulation and strategic game-play.

Some titles are suitable for Adults Only!
CD946D Only £20
AGA Amiga with CD-ROM Minimum: 2mb. + HD or CD32

WHALE'S VOYAGE

Whales Voyage Part One Included FREE

Includes three main parts:
-The role-playing game, where a party of four people move through cities or large towns etc, in the whole galaxy.
-Part two is a complex trading simulation where the player is forced to make money to afford the equipment of the Whale and the crew.
-Finally the game contains strategic space-battles where the player has to fight against pirate ships and other enemies.

AMIGA cd-rom

FREE POSTAGE WHEN YOU ORDER BOTH TITLES.*

epic marketing
Innovative and Original
Ten Years with the Amiga!
www.epicmarketing.ltd.net
Epic Marketing: BCS House - Area50, Cheney Manor, Swindon. SN2 2PJ, UK

08700 110013
Enquiries: 0 1793 514188 *Fax:* 0 1793 514187
Catalogue Requests: 0906 553 1900
Calls to this number should last around a minute and cost about £1.00
Open Mon - Fri
9:30am - 5:30pm
and Saturday Mornings
CREDIT CARD ORDERS WELCOME

POSTAGE
UK: £2.95 per order *(Software & Peripherals).* **Overseas:** £5 per order.
*Free postage in the UK when you order both titles together.

All items are sold subject to our normal terms and conditions and are subject to availability.
Both CD's should be available from stock as of 15th October 1999
Titles have been tested on A1200 based Amiga's. (extra ram & Hard drive may be required)
A full catalogue is sent with all orders.
When ordering please state product code, title and price.
Credit card orders are normally dispatched within 48 hours. E&OE. All prices include VAT.
Cheques and Postal Orders should be made payable to ***EPIC Marketing.***
When paying by cheque add £3 for extra-speedy clearance.

Subscription Order Form

Title ________ Initials __________ Surname ______________________________

Address ____

_______________________ Postcode ______________ Country ______________

Daytime telephone number ____

☐ Please start / ☐ Please extend my subscription at the rate ticked below

Please choose your method of payment

1. ☐ **Direct Debit** (UK only) **SAVE UP TO 44% ON 12 ISSUES 1,2,3 or 4**

(Full amount will be deducted in advance and in one lump sum. Instructions cannot be sent via email, fax or photocopy.)

Instruction to your Bank or Building Society to pay Direct Debits.

Future Publishing · DIRECT Debit

Originator's Identification Number

9 3 0 7 6 3

Future Publishing Ltd. Cary Court,
Somerton. Somerset. TA11 6BR

Please send this form to address shown

1. Name and full postal address of your Bank or Building Society branch

To: The Manager

_______________________________ Bank/Building Society

Address ____

_______________________________ Postcode ______________

2. Name(s) of account holder(s)

3. Branch sort code (from the top right-hand corner of your cheque) ☐☐☐☐☐☐

4. Bank or Building Society account number ☐☐☐☐☐☐☐☐

5. Instruction to your Bank or Building Society

Please pay Future Publishing Direct Debits from the account detailed on this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with Future Publishing and if so, details will be passed electronically to my bank or building society.

Signature(s) ______________________ Date __________

Ref No (Office use only) ______________________

Banks and Building Societies may not accept Direct Debit instructions for some types of account.

AMIGA FORMAT

	6 issues DD & CD	12 issues DD & CD
UK (Direct Debit)	☐ £24.95	☐ £39.95
UK (Cheque/Credit Card)	☐ £24.95	☐ £39.95
Europe (including Eire & N.America)*	☐ £29.95	☐ £49.95
Rest of the World*	☐ £34.95	☐ £56.95

*AIRMAIL

Please indicate ☐ CD ☐ DD

2. ☐ **Cheque** (payable to Future Publishing Ltd. Sterling cheques drawn on a UK account.)

3. ☐ **Visa** ☐ **MasterCard**

4. ☐ **Switch** Issue No/Valid date ______________________

Card No. ______________________ Expires ______________

Signature ______________________ Date ______________

UK readers: return this coupon to AMIGA FORMAT Magazine, Subscriptions, Future Publishing Ltd, **Freepost** BS4900, Somerton, Somerset, TA11 6BR.

Overseas readers: return (postage payable) to AMIGA FORMAT Magazine Subscriptions, Future Publishing Ltd, Cary Court, Somerton, Somerset, UK, TA11 6TB.

☐ Please tick this box if you would prefer not to receive information on other offers.

Back Issues order here:

Please enclose a separate payment for your back issues as shown on the Back Issues page.

Please can I have issue(s): ______________________

Total amount enclosed £ ______________ (£1 postage in Europe, £2 for the rest of the world per issue).

Only available while stocks last!

ORDER HOTLINE 01458 271102

QUOTE ORDER No.AMFP131

AMIGA FORMAT Back issues

Missed AF? Don't miss out completely, order now while stocks last...

THE WORLD'S BEST-SELLING AMIGA MAGAZINE
AMIGA FORMAT
WB3 BEGINNERS GUIDE INSIDE!
50 Things you SHOULD know about your Amiga
Tips! Secrets! Know-how!
Faster Internet
Maximise your Amiga
Stay at home
Forty Exclusive!
Crystal Previews
PerfectPaint
iBrowse 2 Demo
Virus Checker II
Fuzzy Logic
WormWars

DISK CODE: AMF130

CD CODE: AFC046

Issue 130

……

We bring you the gospel according to Amiga where all the truths, fabrications and quirky facts about your machine will be revealed.

On the CD
AFCD46

Countdown to satisfaction with *T-zerØ*, *PerfectPaint*, *iBrowse 2* demo, gallery pictures, game previews and more.

On the DD's
BABYSITTER

Let *SnoopDOS* watch over your system in case any problems arise and eradicate viruses with a new killer.

ATTACK

Save your circuit boards in the screwy game of *Fuzzy Logic* and fight in the fast and furious *WormWars*.

AMIGA FORMAT
BARGAIN AMIGAS!

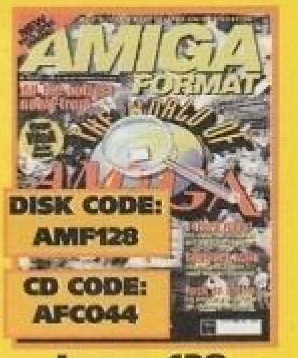
DISK CODE: AMF129

CD CODE: AFC045

Issue 129

Coverdisks

Top transforming tools for Workbench, a galactic guide to the Solar System and warrior adventures with Alcandria.


AMIGA FORMAT

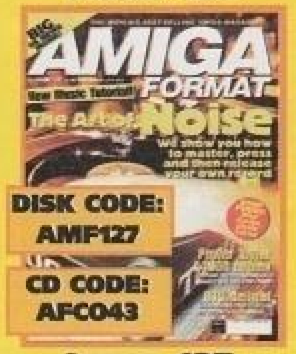
DISK CODE: AMF128

CD CODE: AFC044

Issue 128

Coverdisks

Reminisce with WoA speeches, update PPaint and rule the Empire with Imperator.


AMIGA FORMAT
The Art of Noise

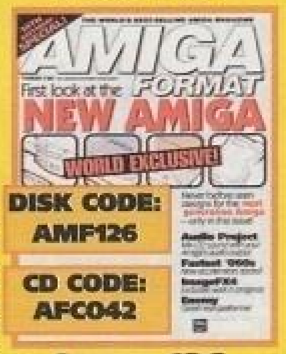
DISK CODE: AMF127

CD CODE: AFC043

Issue 127

Coverdisks

Compress audio files with MPegENcGUI, plus details on free Internet access and fun with George.


AMIGA FORMAT
First look at the NEW AMIGA
WORLD EXCLUSIVE!

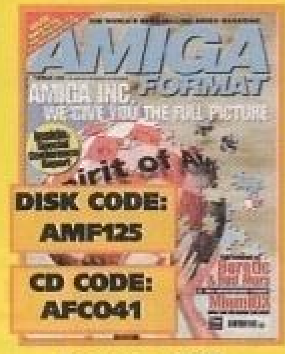
DISK CODE: AMF126

CD CODE: AFC042

Issue 126

Coverdisks

Be stunned by the stars with Almanac II, link your Amiga to a laptop and play the new version of Descent.


AMIGA FORMAT
AMIGA INC. WE GIVE YOU THE FULL PICTURE

DISK CODE: AMF125

CD CODE: AFC041

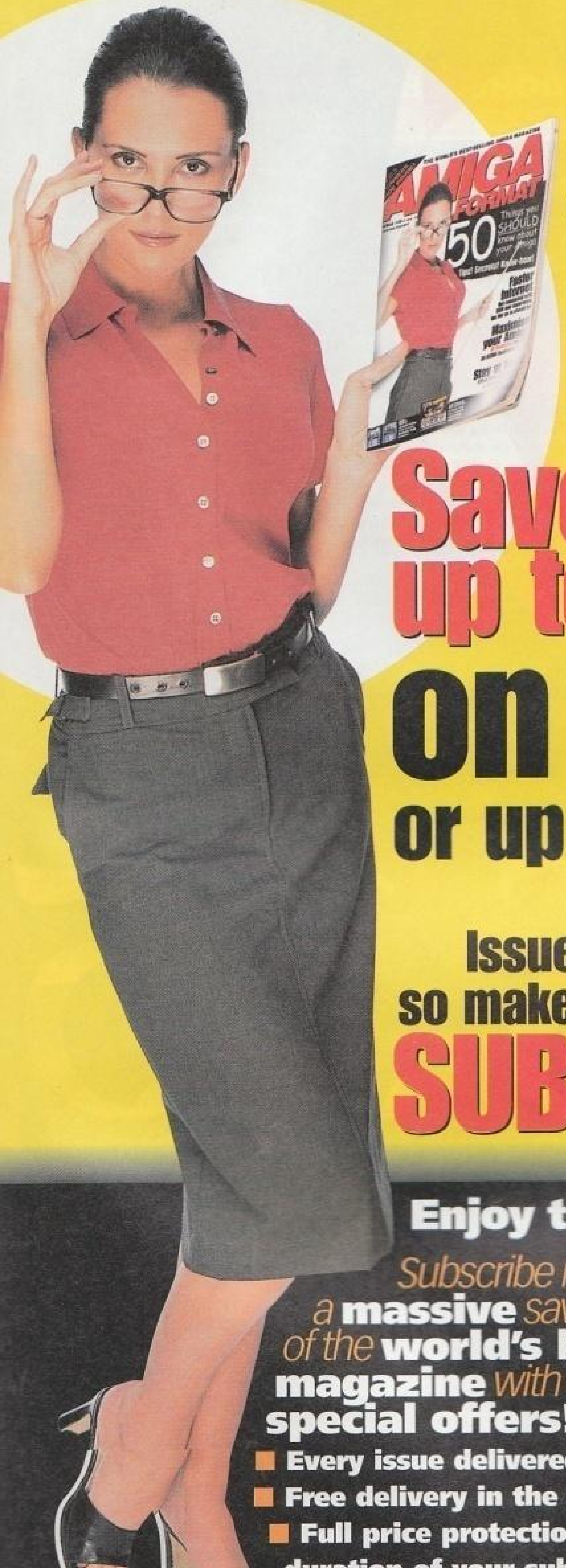
Issue 125

Coverdisks

Design your own web page in a flash with our tools and spend more time playing the Evil's Doom demo.

Treat yourself to a back issue of Amiga Format. It costs just £7 for a back issue complete with coverdisks or CD.

(European orders – add £1 per issue for postage. Rest of the World – add £2 per issue for postage)


THE WORLD'S BEST-SELLING AMIGA MAGAZINE
AMIGA FORMAT
50 Things you SHOULD know about your Amiga
faster Internet
Maximise your Amiga

Just look at what you're missing out on...

Save up to 44% on 12 issues

or up to 31% on 6 Issues

UK only – other countries may save more!

Issues sell out fast in the shops so make sure you never miss an issue

SUBSCRIBE TODAY

Enjoy the benefits of a subscription

Subscribe now and make a **massive** *saving on the cost of the* **world's best Amiga magazine** *with our great new* **special offers!**

- **Every issue delivered to your home.**
- **Free delivery in the UK.**
- **Full price protection for the duration of your subscription.**

How to Order

BY DIRECT DEBIT: Complete and return the form on the previous page. Please note that Direct Debit instructions cannot be accepted by email or fax.

BY CHEQUE OR CREDIT CARD: Complete and return the form on the previous page. Call the SUBSCRIBER HOTLINE on 01458 271102.*

FAX: The completed form on the previous page to 01225 822523.

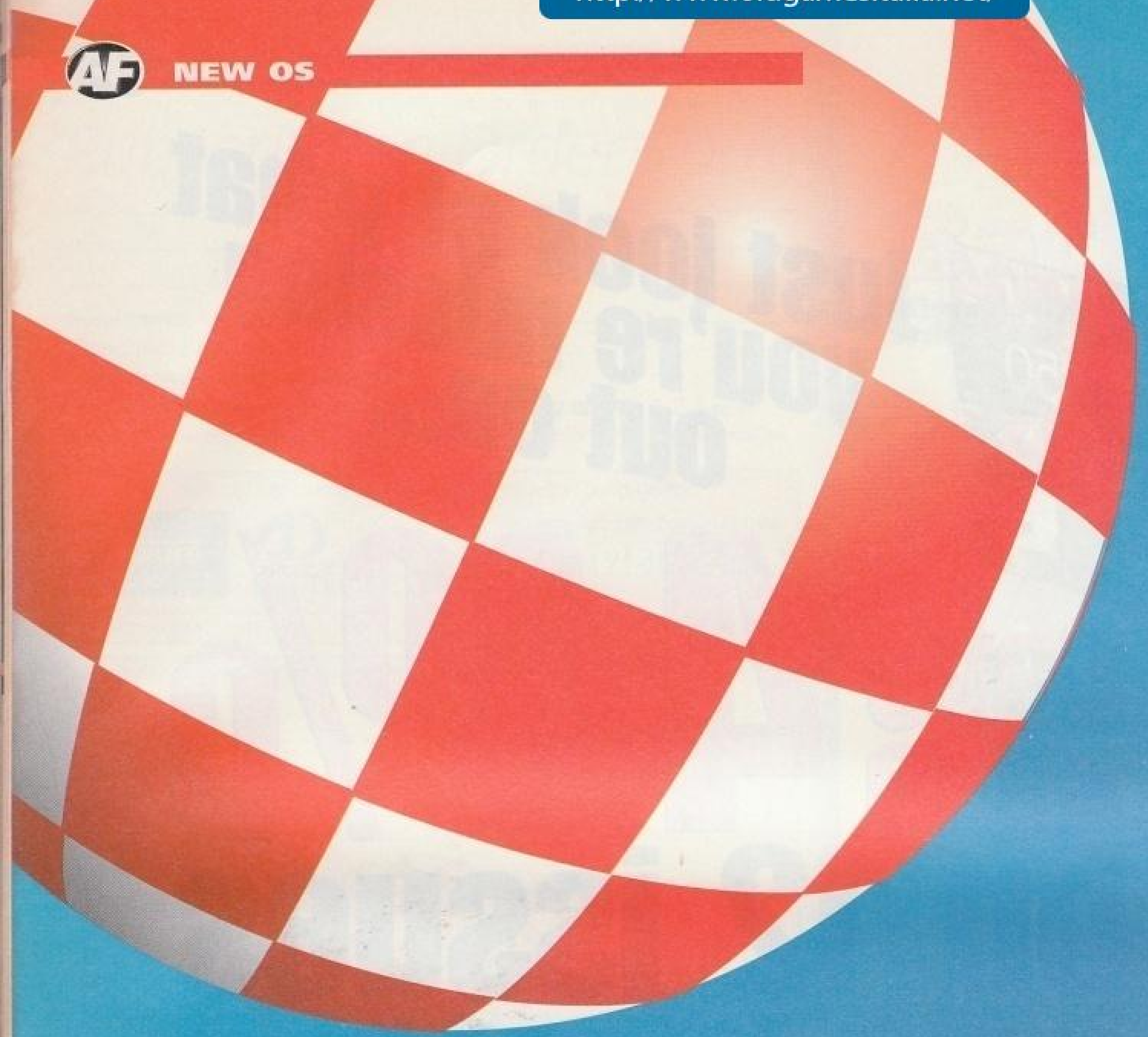
EMAIL: subs@futurenet.co.uk*

WORLD WIDE WEB: http://www.amigaformat.co.uk*

LINES OPEN 8AM - 8PM, MONDAY - FRIDAY

ORDER NOW ON: +44 01458 271102

*IMPORTANT – PLEASE QUOTE ORDER NO. AMFP131
EPHONING OR EMAILING YOUR ORD



OS 3.5

Two years in the making, five years in the waiting, OS3.5 is finally here. We review the release version…

AMIGA OS3.5

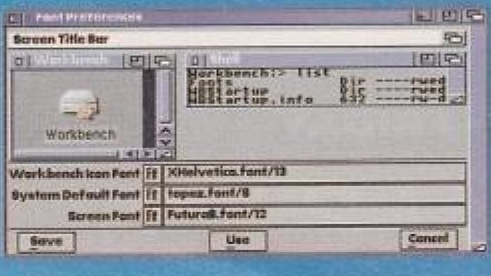
Installer has been reworked. It now has the ability to step backwards in an installation and to play sounds or show pictures (as shown when you install OS3.5).

NEW STUFF!

The last operating system upgrade the Amiga had was OS3.1, officially released in 1994. Since then, various noises have been made about doing a new version, but have come to naught. AROS have been working on a portable replacement for Workbench that can be used on any hardware, but that hasn't materialised to date. So, instead, people upgraded their Workbenches themselves with hacks, patches and third party software galore. There are (sensible, in my opinion) people now using *Directory Opus* as a Workbench replacement or *Scalos*. People everywhere have installed *MCP*, *MCX*, *XYZ* and *PDQ* on their machines in an effort to cure some of the bugs and give them features they'd always wanted from Workbench, but didn't get. Without a doubt all this third party software makes it harder to create a new version of Workbench that people will want to install. Instead of complaining to the authors of these third-party packages about the fact that their software no longer works with OS3.5, it's only natural that people should assume that it is all OS3.5's fault that their favourite hack is now not working.

Before we go any further, yes, it is worth your while buying OS3.5. In the same way that *Amiga Format* (and the Amiga world at large) no longer supports Workbench 1.3, there will come a time

> **Before we go any further, yes, it is worth your while buying OS3.5 and a poor showing of sales will mean the end of Amiga OS development**



Workbench Icon Font XHelvetica.font/13
System Default Font topaz.font/8
Screen Font FuturaB.font/12

The Font prefs in OS3.5 now show a nice preview of what your screen will look like.

AMIGA OS3.5

You can now copy and paste in string gadgets using RAmiga-c and RAmiga-v.

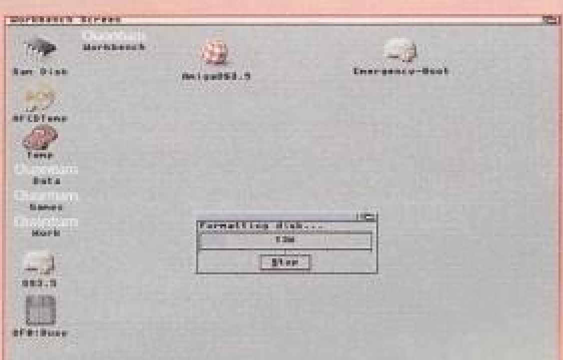
NEW STUFF!

INSTALLATION TROUBLESHOOTING

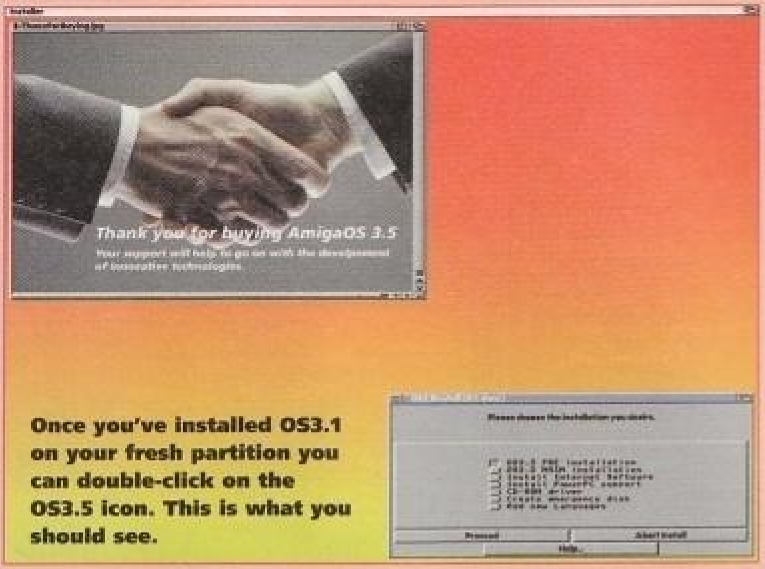
Although Haage & Partner have tried to think of everything when it comes to installing OS3.5 on your hard drive you need to bear in mind some things:

1 Don't just overwrite your existing boot partition if it can be helped. Make another bootable partition onto which you can install OS3.5 and move stuff over to it as you find it works.

2 Once you have a fresh, clean partition of more than 20MB (not the 10MB it suggests in the documentation), do the OS3.1 install. After this, immediately do the CD-ROM driver installation from the OS3.5 Installer. Do this before the OS3.5 pre-installation or you might have difficulty in reading the CD-ROM drive when the machine reboots. If you already have CD software you prefer or require, because of your hardware, make sure this is installed to the drive you are installing OS3.5 to.



Once you've installed OS3.5 make sure you switch to a screenmode that has more than four colours to see the new icons.



Once you've installed OS3.1 on your fresh partition you can double-click on the OS3.5 icon. This is what you should see.

3 Once you've completed the CD-ROM installation you can then do the OS3.5 pre-install. The machine will reboot once you've completed it.

4 You'll be rebooted into OS3.5 (if you have more than one boot partition on your hard drive, make sure you boot from the one you've installed OS3.5 onto by holding down both mouse buttons as soon as the machine resets).

5 If the CD-ROM drive installation has gone okay, you should still be able to see the AmigaOS CD. If not, you'll have to resort to copying whatever worked from your Workbench 3.x installation onto your 3.5 partition using the shell.

6 Once you've got the CD-ROM drive working, do the OS3.5 main installation. This will copy over all the files you should need and update the icons.

7 On the CD, you'll find the current version of Picasso96 and CyberGraphX 3, along with a tool that will convert all your by now ugly MagicWB icons into the new OS3.5 icon format (while leaving the original MWB icons there for use under older versions of the OS). Your NewIcons are displayable under OS3.5 by default. The tool you need to use to change the icons is called AmigaOS3.5:Contribution/Converter-Scripts/Icon-Tools/ConvertMagicWBIcons

8 Remember you'll have a completely fresh installation of Workbench. Although the time and date shouldn't have changed, don't be surprised at the fact that you have an American keymap, or that your screenmode only has four colours. Expect to spend a couple of hours getting your OS3.5 setup up to the standard you had before. Things like Rexxmast will need to be started in your User-Startup again, and you'll almost certainly need to re-install MUI.

Installing Picasso96 and the backdrops meant better resolution and more colour.

(sooner rather than later) that you will require Workbench 3.5 (or later) to do stuff on your machine. More and more software will tell you that it requires at least v44 of the operating system to work, our CDs only having bright icons on OS3.5 systems, our tutorials discussing Workbench 3.5 features and so on. Not only that, but buying Workbench 3.5 is, it saddens me to say, a way of keeping the Amiga alive. Future revisions of Workbench depend absolutely on sales of OS3.5, so a poor showing of sales of OS3.5 will mean the end of OS development for the Amiga. There's already a pirate version of the OS around on FTP sites, but apparently it has two backdoors in it and isn't complete. *Amiga Format* has always been against piracy, but this really is the lowest of the low, and if you can prove without a doubt that someone you know has downloaded (or uploaded) and is using this pirated version, I would urge you to report them to Haage & Partner.

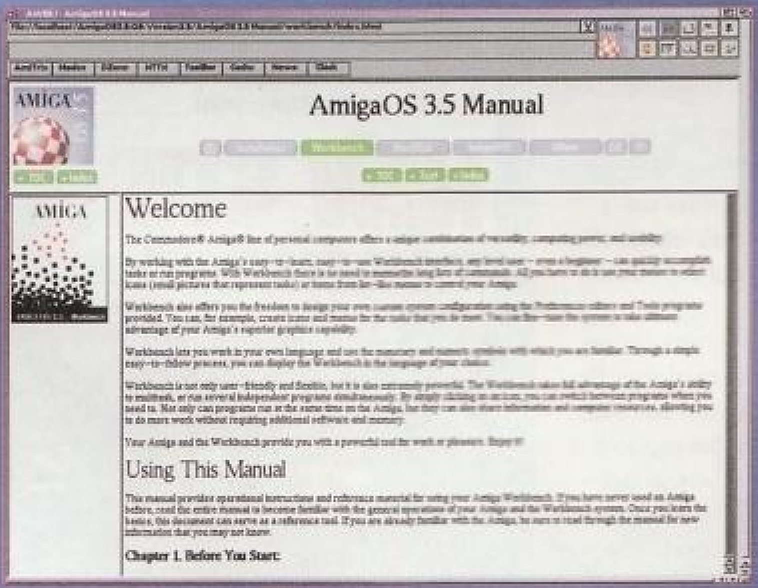
SPOT THE DIFFERENCE?

When you get OS3.5 installed onto your machine, the first thing you notice is that not much has changed, especially if you were already used to colourful *NewIcons.* OS3.5 doesn't really change an awful lot of the immediately visible in Workbench for a good reason – it was already very nice to use. However, there are plenty of neat little touches, such as keyboard navigation of WB that really need further examination. Also present are plenty of things we

AMIGA® OS3.5

If you open a shell window with a Workbench window active, the Shell window will take that directory as its current directory.

NEW STUFF!



AmigaOS 3.5 Manual

Welcome

Using This Manual

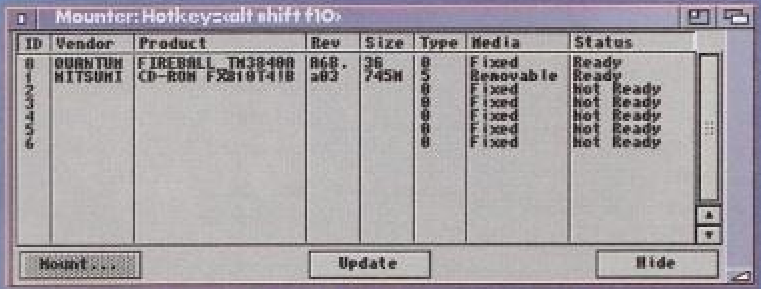
Chapter 1. Before You Start:

The OS3.5 manual comes as web pages or PDF files.

AMIGA® OS3.5

AmigaMail is a new email package. While it might not be very interesting if you already use YAM, it does make use of the new email library provided with OS3.5.

NEW STUFF!



```
Mounter: Hotkey=<alt shift f10>
ID Vendor  Product           Rev   Size Type Media     Status
0  QUANTUM FIREBALL_TM3840A  A6B.  36   0    Fixed     Ready
1  MITSUMI CD-ROM FX810T41B  a03   745M 5    Removable Ready
2                                       0    Fixed     Not Ready
3                                       0    Fixed     Not Ready
4                                       0    Fixed     Not Ready
5                                       0    Fixed     Not Ready
6                                       0    Fixed     Not Ready
```

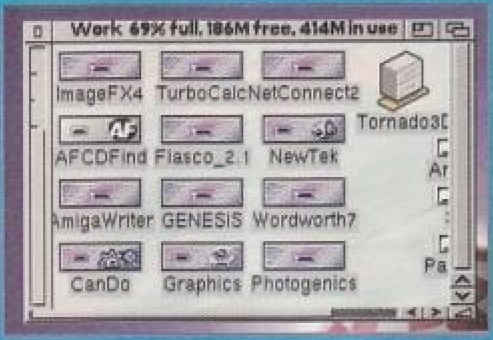
Mount is a new system tool just like SCSIMounter.

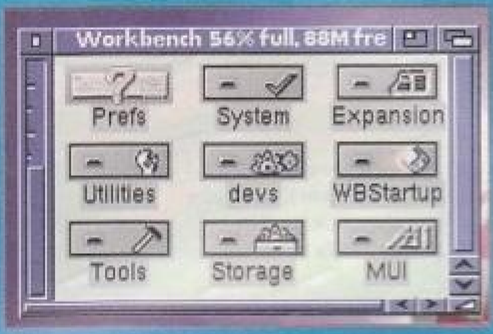
Continued overleaf ➡

AMIGA® OS 3.5

The standard ASL file requester has been updated to allow for new directories, renaming or deleting files, changing the sort order and can be navigated by keyboard.

NEW STUFF!


Work 69% full, 186M free, 414M in use
ImageFX4
TurboCalc
NetConnect2
Tornado3D
AFCDFind
Fiasco_2.1
NewTek
AmigaWriter
GENESIS
Wordworth7
CanDo
Graphics
Photogenics


Workbench 56% full, 88M fre
Prefs
System
Expansion
Utilities
devs
WBStartup
Tools
Storage
MUI

Your MagicWB icons might look strange if you don't lock the palette pens, or you can simply convert them to the new icon standard.

haven't had time to check fully yet (since we only got the final release CD about four days before we went to press), like the new 24-bit printer device and the new email library, the documentation and all the contributions on the CD. One thing we did notice, which was strange, was that the documentation is also available as PDF files on the CD, meaning that you can potentially print it out and have a hardcopy of the manual. I say potentially because the PDFs files have been made with a tool which means that they can't be read on an Amiga. However, a new, capable version of APDF has been put together which can read them, but it's only in German. You can find it at http://berlin.all.de/~termi/e-amiga.html

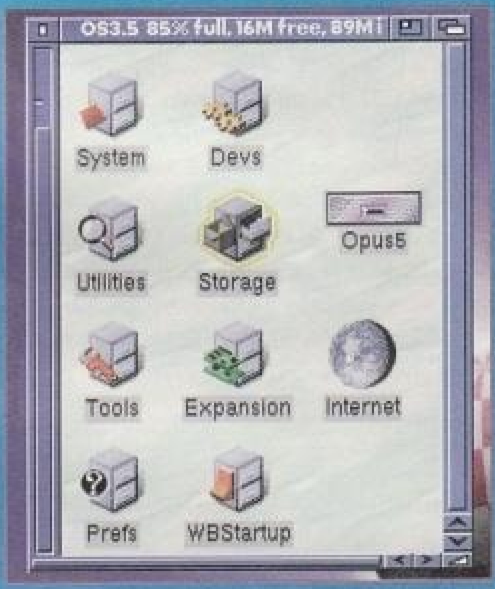
WORKBENCH REPLACEMENTS

You've got used to how *DOpus* and *Scalos* work. You'd rather not go back to a standard Workbench ever again. I understand. You have questions. Does it work with *Scalos*/*DOpus*? Will there be any problems re-installing either once you've installed OS3.5?

AMIGA® OS 3.5

New-style icons can have an old image in them too, so you can have a standard four-colour image and a colourful "glowicon" in the same icon file.

NEW STUFF!


OS3.5 85% full, 16M free, 89M i
System
Devs
Opus5
Utilities
Storage
Tools
Expansion
Internet
Prefs
WBStartup

The new icons have all been drawn by SGI's Matt Chaput.

AMIGA® OS 3.5

If you don't have the tool dictated in an icon's default tool setting, Workbench now asks you if you wish to open the file with another tool.

NEW STUFF!

PROBLEM PATCHES?

NEWICONS: *NewIcons* should still work under OS3.5, even though you'll no longer need to use the *NewIcon* patch program or the newicon.library. You can (and probably should) convert your *NewIcons* to OS3.5-style icons, which will make them faster to display under OS3.5. If you run *DOpus* or *Scalos* you'll still need the newicon.library in the libs: directory.

FUEL GAUGE: Make sure you turn off any other fuel gauge patches you have which may interfere with OS3.5's. If you don't like the fuel gauge at all, you can use the WBC commodity included on the OS3.5 distribution CD to turn it off (AmigaOS3.5:Contribution/Commodities/WBC) and turn on other options, like Fast RAM-only Workbench for graphics card users.

SETPATCH According to Amiga, there are problems with some Amiga 3000 models and 4-way IDE adaptors. In this case you should extend the call of the SetPatch to:

```
C:SetPatch QUIET SKIPROMUPDATE "scsi.device"
```

If you still have problems to start OS 3.5 please rename the file "DEVS:AmigaOS ROM update". Thus the replacement modules are omitted altogether.

If you're using LoadV43Module or NSDPatch in your startup-sequence you should not include them in a new OS3.5 startup-sequence, since Setpatch takes care of all the functionality they provide.

FASTIPREFS: If you are using the program *FastIPrefs* then you should replace this with IPrefs. The new version of IPrefs that comes with OS3.5 supports new features that OS3.1 does not. It also supports some of the options of *FastIPrefs* and eliminates some known bugs, like not being able to turn off borders around icons.

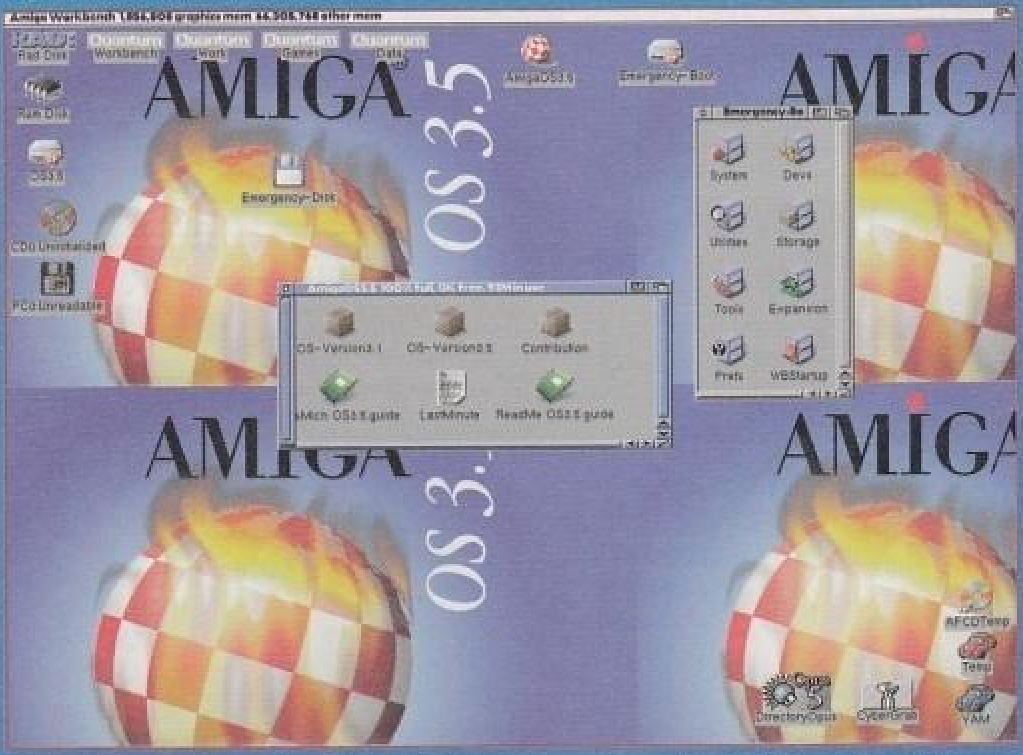
NO GLOWICONS AFTER INSTALLATION: If the GlowIcons are not displayed after installation this is because of an error of your file system. There is a updated version of *SmartFileSystem* that fixes this. But with the current version of *PFS3* the tool that replaces the icons (MergeIcons) will not find any files to replace. In this case you have to replace them manually or wait for the update. Alternatively, if you are running a low-colour Workbench, say four colours, they won't appear either.

MCP/MCX: Most of the patches in these packages still work, with the obvious exception of ones that patch things that are obviously changed in OS3.5, like the fuel gauges. As always, be careful with the patches and build up from scratch if you encounter a lot of problems.

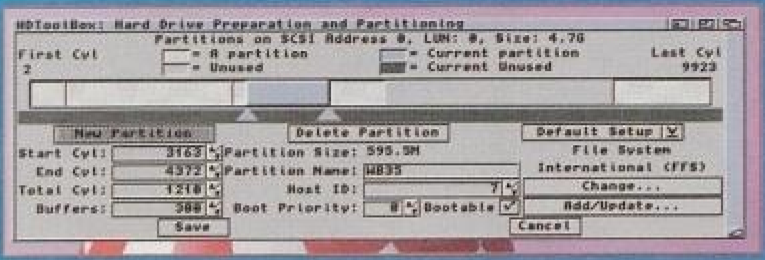
BIRDIE: Birdie works fine under OS3.5, but seems to stop Workbench from refreshing itself.

KINGCON: *KingCON* installs fine, but completely replaces all the functionality of the new shell, as you'd expect.

MAGICMENU/HAPPYENV/OXYPATCHER: All seem to work fine.


AMIGA OS 3.5
Emergency-Disk
AmigaOS3.5
Emergency-Boot
System
Devs
Utilities
Storage
Tools
Expansion
Prefs
WBStartup
OS-Version3.1
OS-Version2.5
Contribution
LastMinute
ReadMe OS3.5.guide
DirectoryOpus
CyberGrab
YAM

If, for some reason, you have to boot from your emergency boot disk your backdrop gets replaced with this "Burning Boing" one.



HDToolBox: Hard Drive Preparation and Partitioning
Partitions on SCSI Address 0, LUN: 0, Size: 4.7G
First Cyl 2 — Last Cyl 9923
Start Cyl: 3163 — Partition Size: 595.5M
End Cyl: 4372 — Partition Name: WB35
Total Cyl: 1210 — Host ID: 7
Buffers: 300 — Boot Priority: 0 — Bootable ☑
File System: International (FFS)

= A partition
= Unused
= Current partition
= Current Unused
New Partition
Delete Partition
Default Setup
Change...
Add/Update...
Save
Cancel

The new HDToolbox is in a scalable window and is better at dealing with all sorts of drives.

The answer is that, yes, at this early stage there are problems with *DOpus* and *Scalos*, but they are cosmetic problems that are only to be expected. Since the icon.library API has been updated, you can expect updates for *DOpus* and *Scalos* to follow shortly to ensure that both packages show OS3.5 icons correctly. Greg Perry of GP Software, the makers of *Directory Opus*, tells us that a free patch for *DOpus* will be ready by the Köln show, depending on when they receive their final copy of OS3.5. Other than that they both work in exactly the same way they did under Workbench 3.1. As for re-installing, we simply copied across our *DOpus* set-up from one machine and downloaded *Scalos* using OS3.5's Internet software to install it on another, so no problem there.

> Haage & Partner have bundled a set of software with the OS, as promised, that will get you online, sending email and browsing the web

Keyboard navigation of windows. You can now use the keyboard to get around Workbench windows, selecting icons and executing them.

NEW STUFF!

INTERNET READY, STEADY, GO

One of the main promises for OS3.5 was a complete set of software to make it easy for people to get online out of the box. Since the minimum system requirements now include 4MB Fast RAM, a hard drive and a CD-ROM drive, it pretty much means that you could get your Internet software from anywhere, but Haage & Partner have bundled it in with the OS, which can't be a bad thing. So, what do you get? Well, the items included aren't necessarily world-beating. If you're serious about the net you may want to get other items, like *YAM*, *NetConnect* or *iBrowse*, but what's provided will get you online, sending email and browsing the web. OS3.5 comes with a standard demo of *Miami* which times out after an hour of use, since the expected bundled version wasn't ready in time, a special version of *AWeb 3.3* providing a JavaScript-enabled web browser and *AmigaMail*. *AmigaMail* is the first application to use the new aml.library, which provides services for any email package that cares to use it. While currently only dealing with POP3 mail, it would be an easier matter to update the library to handle standards like IMAP/4 than expect all the third party authors to write IMAP/4 services on their own.

Overall, the update is a good one, although some of the changes are subtle and not altogether obvious. For instance, Workbench's new ARexx port will come in very handy and some of the new hooks in Workbench's libraries will no doubt be exploited before long. Already there's software reviewed in this issue's PD Select that requires OS3.5, and there will be more over the coming months. OS3.5 actually has a support phone line and email address for registered users (when was the last time you were able to ask a question about the OS of the authors?) and the first update is being worked on as I write this. The true worth of OS3.5 will be obvious in a few months time, but even now it's well worth upgrading.

Ben Vost

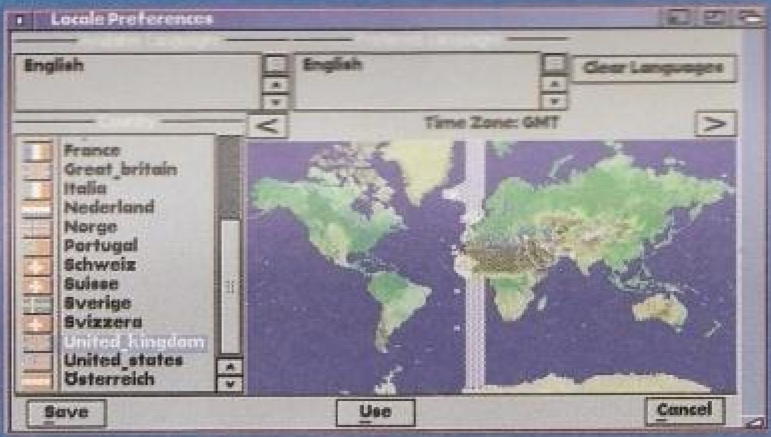
One of the new tools is EditPad, presumably put in so you can avoid the shell. You may use it instead of Ed from now on...

NEW STUFF!

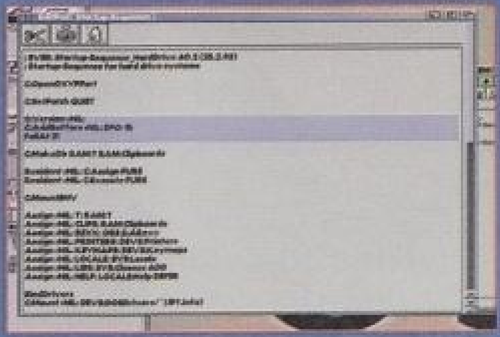
For users with graphics cards, there are tools that allow you to tell Workbench not to use any Chip memory like the included WBC commodity.

NEW STUFF!

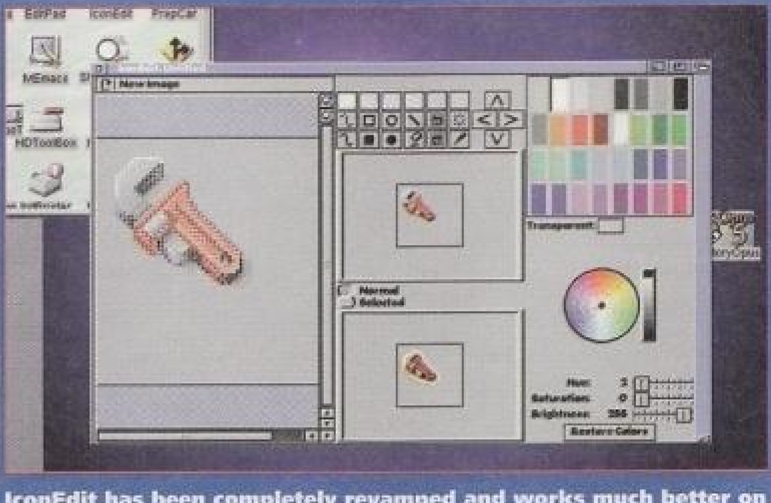
The new Locale is almost the same as the OS3.1 one, but looks prettier.



Locale Preferences
English
English
Clear Languages
Time Zone: GMT
France
Great_britain
Italia
Nederland
Norge
Portugal
Schweiz
Suisse
Sverige
Svizzera
United_kingdom
United_states
Österreich
Save
Use
Cancel



EditPad is a new text editor supplied with OS3.5.

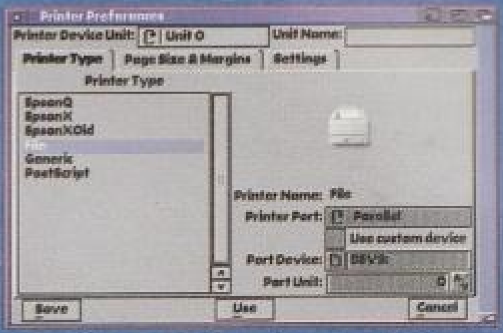


EditPad
IconEdit
PrepCar
MEmacs
HDToolBox
New image
Normal
Selected
Transparent
Hue
Saturation
Brightness
Restore Colors

IconEdit has been completely revamped and works much better on graphic card screens.

Progress bars for copy and delete are a welcome and long-overdue addition. Better yet you can abort the processes too.

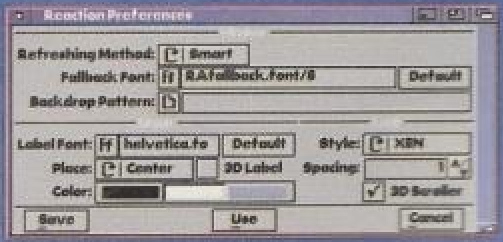
NEW STUFF!



Printer Device Unit: Unit 0
Unit Name:
Printer Name: File
Printer Port: Parallel
Port Device: DEVS:
Port Unit: 0

Printer Preferences
Printer Type
Page Size & Margins
Settings
Printer Type
EpsonQ
EpsonX
EpsonXOld
File
Generic
PostScript
Use custom device
Save
Use
Cancel

The Printer prefs have been completely overhauled.



Refreshing Method: Smart
Fallback Font: RAfallback.font/8
Backdrop Pattern:
Label Font: helvetica.fo
Style: XEN
Place: Center
Spacing: 1
☑ 3D Scroller

Reaction Preferences
Default
Default
3D Label
Color:
Save
Use
Cancel

ReAction (ClassAct) acts as the GUI for most Workbench applications.

The CD contributions drawer is full of useful things, like tools to convert icons to the new standard and an example of WB's ARexx port.

NEW STUFF!

Stop your Amiga from becoming UNSTAB

Rescue your Amiga from corruption and crashes with our emergency first-aid course

After many articles on souping-up your Amiga, we owe you a feature on making it more stable. The theme is avoiding crashes, not optimising performance. As you upgrade, programs or entire systems may stop working. I shall explain why, and what you can do about it.

Some Amigas are very stable, others crash almost as often as Macs and PCs. The difference can be analysed and changed, with good tools and knowledge of the right approach.

CLASSIFICATION

Before you can fix a fault you must understand it. In Datalink , almost 20 years ago, I observed that there are basically two error messages, "Bad Device" and "Probable User Error". Tandy opted for three, "What?", "How?" and "Sorry?" UNIX is generally considered terse for retaining only the last character of those three, the question mark.

Little has changed, except these days you're less likely to receive any message. Graphical User Interfaces try to avoid saying anything, resorting to Gurus – notices that something awful has affected one or all the things you're doing – and, at worst, spontaneous lock-ups and resets.

Much of my advice deals with software patches and settings, but they're no good if your hardware is liable to spontaneously self-destruct. The key word is spontaneous. Hardware problems happen regardless of what programs you're running.

Hardware

If your machine crashes just a Shell or quiet Workbench, you've got 'hardware' problems. The Amiga OS is well-tested, reliable firmware, assuming you or some malignant program haven't messed with the system files. Without a consistently write-protected set of system disks, you can only guess. Viruses are rarer than cockups, but both are real threats.

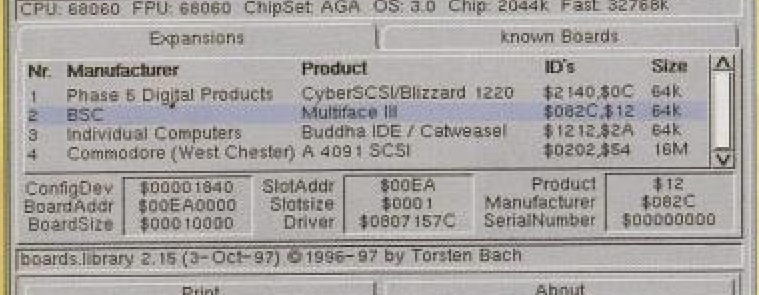
> *If your machine is flaky it could suffer from a classic hardware problem: overheating, insufficient power, loose connectors or being pushed too hard*

If you suspect a hardware fault, create a 'clean' Workbench partition from original floppies and boot from that. If that does not crash when using just the standard system files, your problem is likely to be caused, and cured, by software.

But if your machine is flaky whatever you run, this is the section for you. The programs in use shouldn't matter, although if a drive fault is suspected it's worth setting up a big copy operation. Chugging away at drives also tests the power supply more effectively than silent running.

The four classic hardware problems are overheating, insufficient power, loose connectors and pushing too hard. It's best to start by checking the first two because they're the most obvious.

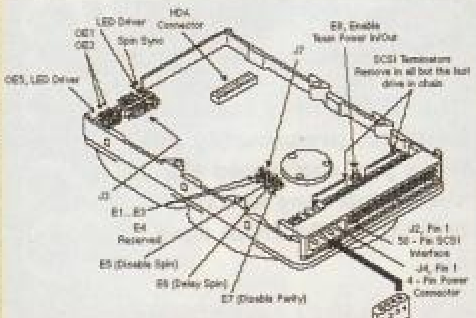
MUI_Showboards identifies all Zorro cards working in your system.



```
CPU: 68060  FPU: 68060  ChipSet: AGA  OS: 3.0  Chip: 2044k  Fast: 32768k

Nr. Manufacturer                Product                     ID's        Size
1   Phase 5 Digital Products    CyberSCSI/Blizzard 1220     $2140,$0C   64k
2   BSC                         Multiface III               $082C,$12   64k
3   Individual Computers        Buddha IDE / Catweasel      $1212,$2A   64k
4   Commodore (West Chester)    A 4091 SCSI                 $0202,$54   16M

 ConfigDev  $00001840  SlotAddr  $00EA          Product  $12
 BoardAddr  $00EA0000  Slotsize  $0001     Manufacturer  $082C
 BoardSize  $00010000    Driver  $0807157C SerialNumber  $00000000

boards.library 2.15 (3-Oct-97) © 1996-97 by Torsten Bach
```

BALANCE OF POWER

A standard A1200 power supply accommodates one extra drive and trapdoor memory. Any significant extra load on the 12 volt rail means you'll need a stronger supply. The A500 one is more generous, adequate for a 3.5" hard drive and any 68K accelerator.


LED Driver
HDA Connector
OE1
OE2
Spin Sync
OE5, LED Driver
E8, Enable Term Power In/Out
J7
SCSI Terminators Remove in all but the last drive in chain
J3
E1...E3
E4 Reserved
E5 (Disable Spin)
E6 (Delay Spin)
E7 (Disable Parity)
J2, Pin 1 50 - Pin SCSI Interface
J4, Pin 1 4 - Pin Power Connector

Check the net for details of drive setup and spin delay jumpers.

On the CD
-In_the_Mag-/Stability

LE

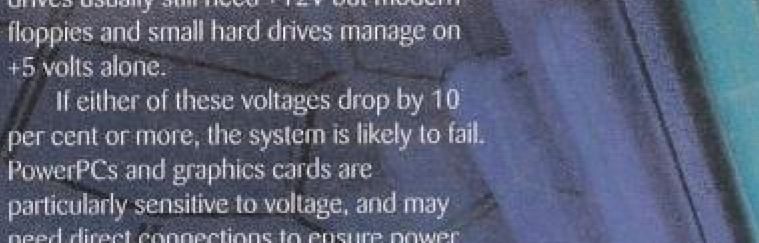
The main Amiga power cables supply +5 volts for digital logic, and +12V for older drives and interfaces. CDs and larger hard drives usually still need +12V but modern floppies and small hard drives manage on +5 volts alone.

If either of these voltages drop by 10 per cent or more, the system is likely to fail. PowerPCs and graphics cards are particularly sensitive to voltage, and may need direct connections to ensure power gets through from a beefed-up supply.

You can check the main power rails with a voltmeter at the floppy connector, but the voltage may sag more at crucial places in the circuit, like daughterboards. It's dangerous to poke around with the power on, so don't try this unless you know which pins you need to test and can access them easily.

Serial and audio ports use minus 12V as well as the plus 12V supply to derive symmetrical signals. If sound is recognisable but grossly distorted, perhaps with serial port problems, but otherwise a machine works, check the 7905 regulator in the -12V supply on a big box Amiga, or the middle pin on domestic Amigas - rated at a tenth of an amp - for -12V.

Disable reselection in HDToolbox to cure some SCSI problems.



Define/Edit Drive Type

Define a New Drive Type

FileName: drive definitions
Manufacturers Name: IOMEGA
Drive Name: ZIP 100
Drive Revision: E.08
Cylinders: 2891
Heads: 1
Blocks per Track: 68
Blocks per Cylinder: 68
Reduced Write Current Cylinder: 2891
Write Precomp Cylinder: 2891
Size: 98260K (95 Meg)
Park head where (cylinder): 2891
Supports reselection ✓

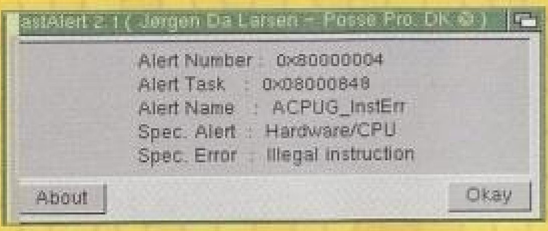
Continued overleaf ➡

➡ If your big-box computer crashes at bootup, the initial load might be swamping your power supply. This can even affect tower systems; one work-around is to delay spinning up drives with software or jumper settings. Big drives can apply a delay based on their SCSI ID, or can be told not to spin up until accessed – this makes initialisation slower but safer.

THERMAL OVERLOAD

Overheating should be obvious, but it's amazing how hot components made for speed can safely get; certainly hotter than you'd like to touch, even momentarily, with bare skin. Chips can run at temperatures up to 100° Celsius, though their lifetime is reduced. I've never heard of an Earthbound computer that runs too cool.

Diagnosing overheating involves two symptoms – apparent heat somewhere, or even a hot smell, suggesting damage – and a system that gets increasingly crash-prone the longer you run it. Such problems are noticeably worse in warm weather.



```
Alert Number : 0x80000004
Alert Task   : 0x08000848
Alert Name   : ACPUG_InstErr
Spec. Alert  : Hardware/CPU
Spec. Error  : Illegal instruction
```

Last Alert tells you the cause of a crash when you next reboot.

Ventilation cures overheating, so consider raising your fanless computer off the carpet, or moving cables or other components to prevent congestion in a big Amiga. Ensure airflow around the power supply case as well as the computer. You need not drill holes, Sinclair-style, if the ones Commodore provided are unblocked, but might find it prudent to leave desktop system trapdoors open.

In extremes you can run any Amiga without its case. This minimises overheating risks but could be fatal if something conductive drops into a crucial place. This is de rigeur for Simon and Richard, but a dangerous pose unless you enjoy fiddling with hardware. Nude computers interfere with AM radio systems nearby, signalling their activity to gurus but annoying others.

PLAYING IT COOL

The standard way to cool a computer is to waft air around with a fan, but if the wind does not pass the thing that's getting hot, the effort is wasted. Whether they blow or suck, Amiga fans fill the power supply with dust – best left alone, in that kilovolt environment – and whistle through the floppy ports.

Fans are noisy and collect dirt. They're essential in big systems but best avoided if you can make convection – the tendency of warm air to rise – create the flow for you. Heatsinks, metal blocks that carry heat away from parts that use power, extend the life of any chip that gets hot to the touch, as long as there's airflow around them. The metal case of a big Amiga is an important heatsink in its own right. Drives and boards in cramped places benefit from heatsinks, but they are of marginal benefit compared with airflow.

Software

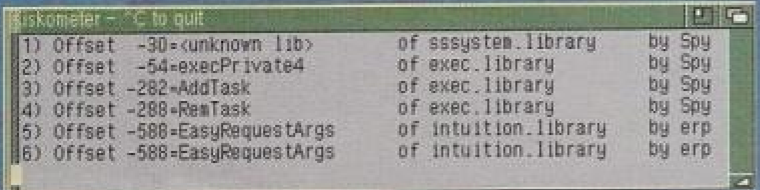
The most erratic systems have hardware faults, but software causes most instability. The more programs you run, the more bugs you'll find. It's often more important to know about bugs than to fix them. About half of all fixes introduce a new problem that you're not told about – and which may be worse, when you get around to comparing it.

Many problems stem from interactions rather than a single cause, so make sure that the components of your software are compatible. Run Workbench files made for your Kickstart, rather than a hodge-podge from other versions. Match libraries; weird problems are likely if you mix RTG components or versions of IXEMUL and IXNET. To check the version of a file, type `VERSION <file> FULL`, where <file> is the library or device you want to test.

SetPatch is the official 'fix file', invented by Commodore and updated by Amiga Technologies and Amiga Inc. SetPatch collects major system bug-fixes in one program which runs at the start of any reliable startup-sequence. Recent versions suit all Amigas from Kickstart 2.0 onwards, installing just what your system needs. Type SetPatch in a shell to see the version, and what it fixed.

LOCKS AND CRASHES

Unstable Amigas may lock up, ignoring all input, or spontaneously reset. It's not easy to reset an Amiga in software; resets are normally caused by system bugs, so you should suspect hardware, processor libraries and patches. Your hardware might not be in a consistent state after such involuntary resets, so it's wise to power down and reboot from scratch to ensure everything starts from a clean slate.

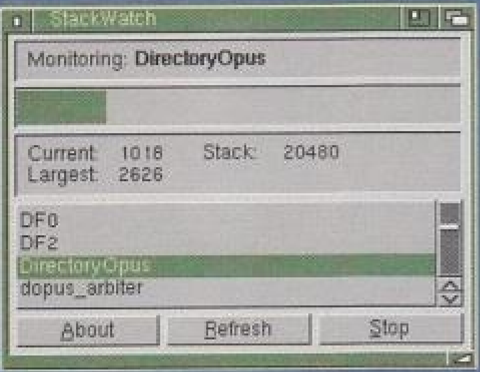


```
1) Offset  -30=<unknown lib>        of sssystem.library     by Spy
2) Offset  -54=execPrivate4         of exec.library         by Spy
3) Offset -282=AddTask              of exec.library         by Spy
4) Offset -288=RemTask              of exec.library         by Spy
5) Offset -588=EasyRequestArgs      of intuition.library    by erp
6) Offset -588=EasyRequestArgs      of intuition.library    by erp
```

Kiskometer monitors exactly who is changing what in your system.

If your computer stops dead, try pressing the Caps Lock key a dozen or more times. If the light gets stuck, on or off, communication between keyboard and processor has failed, and you must reboot. If the crash was during startup, hold both mouse buttons through reset and select 'boot with no startup sequence'. Rename your WBStartup drawer and User-startup file temporarily, and try to boot without the hacks and extensions therein. Reintroduce these cautiously, until you find the one causing the problem.

> *After a software failure alert it is safer to reset your machine rather than continuing because bad code might have corrupted other programs*



StackWatch is one of a stack of tools to monitor space on AFCD47.

Extra ECHO and WAIT lines in User-startup track progress when a system crashes when booting. WBStartup+ selectively disables startup commodities and determines the order in which extensions are loaded. Some interact badly at first, so priority juggling can persuade an otherwise incompatible collection to co-operate.

DEADLOCKS

If you can still move the mouse pointer, but windows are not being updated, a time-critical task is sapping your CPU power. The culprit is probably a device driver waiting for a message that will never come. Drivers and handlers run at higher priority than applications, and are meant to back off once they've done their urgent work. Deadlocks result if they keep running, so custom task priorities threaten stability.

To track and eliminate deadlocks, move mount files from your Devs to Storage drawer, then mount them individually by clicking on the WB3 icons, or issuing `MOUNT` commands on old Amigas, to work out which one is getting stuck. This may indicate an interface, drive or cable problem.

`WAITVAL SYS:` at the beginning of your startup-sequence prevents a host of error messages if the computer needs to revalidate the system partition after a reset. This is likely if a prior crash occurred while it was updating system files.

GURU REPORTS

Motorola processors detect nonsensical instructions and trigger an 'exception' which produces a Guru or 'Software Failure' alert, stopping the offending task. If this is an application others may continue, but it's safer to tidy up and reset, because bad code might have corrupted other programs. Guru tools and alert patchers give extra information, as discussed in my 'Under The Bonnet' series last year.

Programs that stop with code '87000004' were meant to run from a Shell, and fail because they lack Workbench startup code. Start them from a direct CLI command or an `ICONX` script, and these crashes will disappear. '8000000B' indicates a coprocessor exception, common if you try to use programs compiled for another type of FPU or MMU.

The prevalent Guru codes detected by the processor start with 8000000 followed by 2, 3, 4 or A. These mean that the processor has encountered a daft instruction, usually because it's jumped out of the real program or something has overwritten that code. Such corruption is the prime cause of crashes, but tools can detect and prevent it.

TIGHT SOCKETS

Loose connectors are the commonest cause of intermittent problems, so major A600, A1200 and A4000 parts are soldered directly to the motherboard, rather than socketed as on earlier Amigas. It is cheaper to swap parts on an A500 or A3000, and a good way to diagnose blown components, but many faults on old machines may be relieved by cleaning chip legs and sockets with isopropanol, then plugging them back in properly.

The Amiga trapdoor ports and Zorro 3 processor socket carry the most critical signals. These big connectors are less than positive to trim costs, and you're lucky to find a board so well-engineered that it works first time after replacement.

Make sure it's plugged in straight and all the way. Try again if you get a solid coloured screen when you power up, indicating a synchronisation problem, caused by a loose connector, total incompatibility or a blown motherboard, in order of probability and preference.

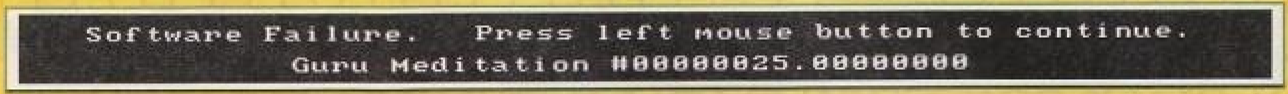
DRIVE CONNECTIONS

SCSI faults are rare if all lines are actively terminated at both ends of the chain. Sub-standard drives are unreliable unless you disable HDToolbox 'reselection'. If any drive does not appear, check that each unit on a cable has an unique ID number.

IDE master and slave combinations are not standardised, requiring specific jumper information for all your drives. Type the part number into a web search engine to locate drive specifications. Test drives individually if a combination fails. Limit the MaxTransfer size to 0xFE00 unless you know your IDE drive can handle more.

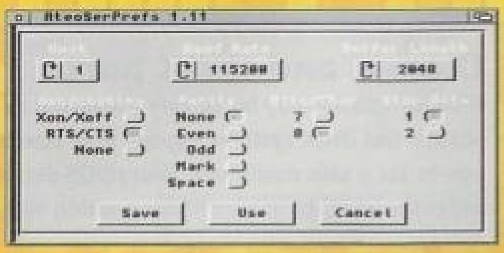
The external plugs on the Amiga are liable to mechanical and consequently electrical faults. You can lock up or reset the machine from almost any of them! Serial hardware faults suggest cable or -12V supply problems, or too high a baud rate. If you fail to plug Zorro cards in properly the intelligent bus controller usually ignores them completely. Overheating boards are present from cold but disappear after a reset.

If a machine is really flaky, unplug everything you can and test a bare system. If this crashes, you need a new motherboard, or chip swaps on A3000 or earlier systems. Replace the add-ons, checking as you go. This is tedious as you have to power down between each change and the next.



```
Software Failure.   Press left mouse button to continue.
        Guru Meditation #00000025.00000000
```

The original Workbench 1 instability report, for Gurus only.



Reduce baud rates and use RTS/CTS handshaking to avoid serial overruns.

PUSHING TOO HARD

This topic could refer to determinedly inserting 23-way plugs in 25-way sockets, or IDC connectors upside down, but I'm more concerned about a 'live fast, die young' mentality. If you run everything in your system at its limit, you court trouble. This fashion-victim status is the enemy of stability, aptly described as 'living on the (b)leeding edge'. The Amiga architecture is so open-ended that it's important to compare risks and benefits, unless you enjoy farming for its own sake.

If you overclock your processor, pile on gadgets regardless of power limits, use the top scan and baud rates, squeeze extra tracks and sectors out of your drives, run cables as far as possible in tight spaces, and insist on testing 'Beta' software, you will have problems. You may enjoy fixing them, and the benefit might outweigh the cost, but your system's stability will suffer.

Every time you try something new, you run the risk of losing something you already have. Most stable computers are set up and left alone, with nothing more than backups and a little file housekeeping to disturb the applications. I dedicate one machine for tests and another to serious work.

Whenever you add or remove a card, utility or DOSdriver, keep a mental note of what you've done. That knowledge will enable you to restore a stable system after a failure, when millions of other tweaks will make no significant difference.

Nothing lasts forever. Mechanical components like mice, keyboards and disk drives deteriorate steadily over the years, but most survive until something traumatic happens to them. As soon as they become flakey, get another – it will only get worse, and could stop working completely at any time. There's scant difference between 0 and 100 per cent in digital systems, and anything that moves or gets hot eventually succumbs to mechanical failure.

MEMORY PROTECTION

Thomas 'Thor' Richter's brilliant *Guardian Angel* software uncovers loads of hidden bugs in sloppy programs and patches. This is the latest in a host of tools that can detect badly-behaved programs and mitigate their effects.

Programs and data are interchangeable in memory. This is a great strength of the Turing/Von Neumann computer architecture, but also the root of most bugs. If a program puts data in the wrong place anything could happen later, and it may be hard to connect the perpetrator with the result.

UNIX and latterly Windows and Mac systems use hardware to detect memory addressing errors, but mainly to implement 'virtual memory', swapping programs and data to and from temporary disk space. This is always dodgy on Amigas. GigaMem and VMM are certain to get knotted if they search a system list that has been swapped out during an AmigaOS 'critical region'. If you run out of space, use an application with its own VM routines, rather than a system-wide afterthought, or preferably get more real memory.

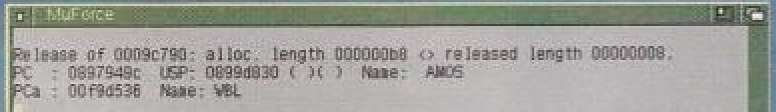
ENFORCEMENTS

Amigas with Memory Management hardware can still be much more reliable than those without. Mike Sinz's '*Enforcer*' program trapped many program bugs that would otherwise trash memory, but it is outdated. Phase 5 ship their own version, *CyberGuard*. Thor's freely-distributable *MMULib* includes *MuForce* and *Guardian Angel*, which also monitors unallocated memory and checks that allocations and releases correspond.

These 'enforcers' trap and report attempts to access memory which is not owned by the task. They consume negligible resources unless your software does risky things, and are an excellent way to sort wheat from chaff. Every 'hit' generates a pile of numbers, recording the local context of the exception for programmers; the task name and operation trapped give most away.

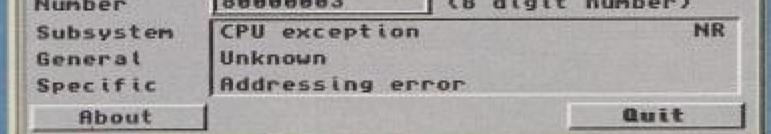
Poorly-tested C programs often try to access structures without setting a base address, so they end up fiddling around in low memory. Enforcers block writes to this sensitive area, and return a relatively safe zero on reads. Address zero on an Amiga system normally holds the value zero, and many programs rely on that to stop themselves falling off the end of null-terminated lists!

THOmas Richter, THOR, has done more than most to make Amigas reliable.



```
Release of 0009c790: alloc. length 000000b8 <> released length 00000008.
PC  : 0897949c  USP: 0899d830 ( )( )  Name:  AMOS
PCa : 00f9d536  Name: WBL
```

Thor's Guardian Angel reveals a hole in AMOS memory allocation.



```
Number     00000003   (8 digit number)
Subsystem  CPU exception                NR
General    Unknown
Specific   Addressing error
```

This cryptic Guru means software tries to access non-existent hardware.

NIPPON RAW FISH

Low-level debugging tools, from *Kickstart*'s built-in WACK upwards, send results directly to Amiga serial port hardware. This makes sense if a bug has clobbered the whole system, but if you don't happen to have a 9600 baud serial terminal kicking around you must divert their reports to a file or window. The classic way to do this is with *Sushi*, by Commodore's Carolyn Scheppner. *Sashimi* is the latest flavour, well worth directing to a CON window early in your user-startup.

Purify, *MemSniff* and many other memory management tools on our CD work without hardware assistance. *Mungwall* is the classic of this genre, and works best in conjunction with an enforcer.

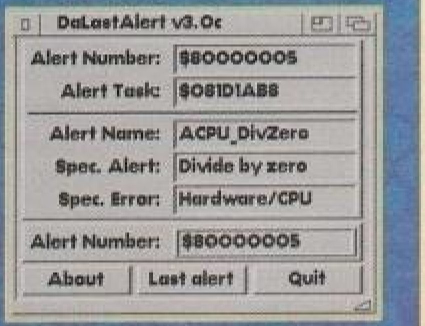
MUNGWALL

Mungwall puts characteristic hexadecimal patterns in places programs should not touch: values like $C0DEDBAD at zero,

Continued overleaf ➡

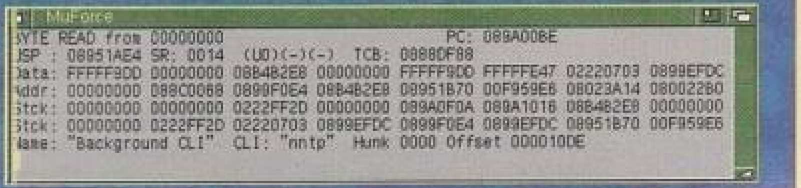
$ABADCAFE in unused space, $DEADFOOD in space reserved but uninitialised, and $DEADBEEF in memory that has been deallocated. Watch out for these giveaways in *Enforcer* reports.

Mungwall also allocates and marks extra space at each end of an allocation, so it can detect common problems where programmers narrowly miss the intended space. If you find such problems, save the debugger output and send it to the programmers. Distrust such applications, especially if they write values willy-nilly.



Alert Number: $80000005
Alert Task: $081D1AB8
Alert Name: ACPU_DivZero
Spec. Alert: Divide by zero
Spec. Error: Hardware/CPU
Alert Number: $80000005

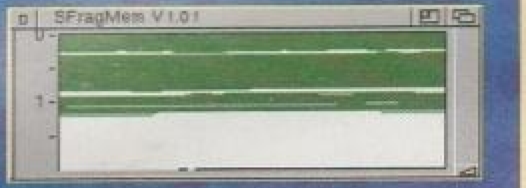
Division by zero is a sure sign of sloppy programming.



```
BYTE READ from 00000000                              PC: 089A00BE
USP : 08951AE4 SR: 0014  (U0)(-)(-)  TCB: 0888DF88
Data: FFFFF9DD 00000000 08B482E8 00000000 FFFFF9DD FFFFFE47 02220703 0899EFDC
Addr: 00000000 088C0088 0899F0E4 08B482E8 08951B70 00F959E6 08023A14 08002280
Stck: 00000000 00000000 0222FF2D 00000000 089A0F0A 089A1016 08B482E8 00000000
Stck: 00000000 0222FF2D 02220703 0899EFDC 0899F0E4 0899EFDC 08951B70 00F959E6
Name: "Background CLI"  CLI: "nntp"  Hunk 0000 Offset 000010DE
```

MuForce shows how often programs 'fall through' to access address zero.

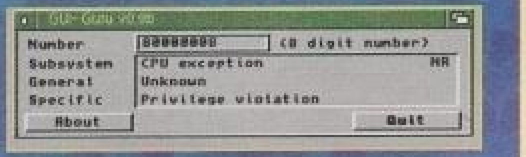
Tools like MemWatch and MemMeter highlight programs that 'creep', allocating memory that they never release. This is another common Amiga programming error, for want of the 'resource tracking' in UNIX, Qdos and QNX. Unchecked creep eventually causes crashes.



Memory may run out because it is fragmented - split into too many sections.

STACK CHECKS

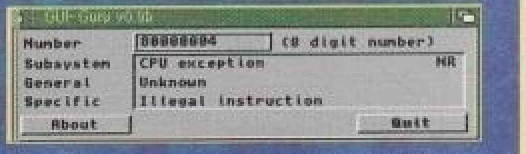
Every AmigaOS task has a 'stack' memory area, reserved for temporary results. If a program tries to put too much on its stack, adjacent memory gets corrupted.



Number 80000008 (8 digit number)
Subsystem CPU exception MR
General Unknown
Specific Privilege violation

Software written for old 68000s may trigger privilege violations on new chips.

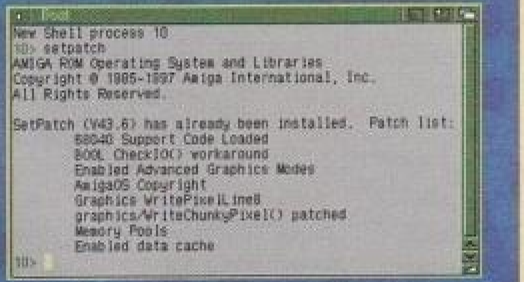
The amount of stack space a task gets depends on how it is started. Workbench icon info includes a 'stack' parameter. Every task needs space for its registers while another process is using the processor, and many programs are happy with just a few kilobytes of stack, but languages like C and Pascal demand more, to cope with recursion and variable allocation inside their blocks.



Number 80000004 (8 digit number)
Subsystem CPU exception MR
General Unknown
Specific Illegal instruction

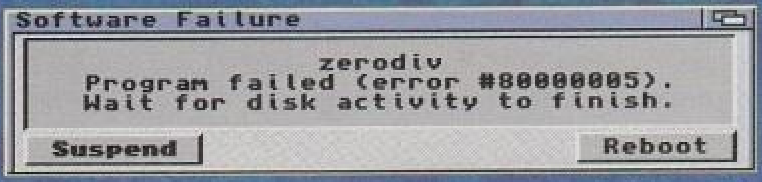
Illegal instructions are usually meant to be data, or corrupted code.

We've collected programs to monitor and manage stacks on *AFCD47*. Tools can dynamically report the amount of stack space a task is using, making it obvious when an overflow has occurred and a crash is impending. You can add stack space to a running program but it's safer to quit and start again with more.



```
New Shell process 10
10> setpatch
AMIGA ROM Operating System and Libraries
Copyright © 1985-1997 Amiga International, Inc.
All Rights Reserved.

SetPatch (V43.6) has already been installed.  Patch list:
        68040 Support Code Loaded
        BOOL CheckIO() workaround
        Enabled Advanced Graphics Modes
        AmigaOS Copyright
        Graphics WritePixelLine8
        graphics/WriteChunkyPixel() patched
        Memory Pools
        Enabled data cache
10>
```

Setpatch resolves known problems on this AGA 060 Kickstart 3.1 Amiga.



```
Software Failure
          zerodiv
  Program failed (error #80000005).
  Wait for disk activity to finish.
```

Starting with Kickstart 2, the option to suspend tasks that would otherwise crash the machine was given.

Programs like *CentreQuest*, *NewEdit* and *Amiga E* tasks relocate their stacks without telling the system what they've done, so snoopers show a fixed, negative space. The StackSnoop drawer includes Thor's fix for a bug in the AmigaOS console device.

To discourage stack overflows, add the line: `STACK 65536` at the start of your S:Shell-startup file. This allocates 60K more stack space for every command – that's often wasted, but preferable to a crash if you have memory to spare.

Simon Goodwin

KNOWN PROBLEM PROGRAMS

Risking howls of protest, this box categorises programs known to cause stability problems. I'm not saying you should not use these – the list includes some irreplaceable, even unavoidable programs – but you should be wary about them.

MCP, hacks and patches

Aminet and compilations like MCP abound with patches that modify system routines to fix bugs or add functions. This reconfigurability is both a strength and weakness of the Amiga. Some are innocuous, others dangerous, and layered patches often yield unexpected and unwanted results.

Hacks may introduce new bugs, for instance the original WritePixel8 chunky graphics routine is slow and corrupts its input; patches are faster but go awry if two programs try to use them at once! Angela Schmidt's *Kiskometer* monitors system patches, warning of programs that compete, patching the same function for different purposes.

IXemul and UNIX ports

UNIX programs may be quickly converted by linking them with IXemul, a UNIX emulation library. But UNIX systems expand task stacks automatically, whereas AmigaOS requires you to set a safe maximum. *SnoopDOS* detects programs that call IXemul and StackWatch indicates whether they're staying within safe bounds.

Magic User Interface

MUI makes heavy demands on graphics memory, and can crash Amigas when that runs out. To avoid this, limit screen sizes and colour depth, share screens between applications, or buy a graphics card. MUI's mass of options and plug-ins makes testing particularly difficult. Be wary about 'updating' MUI custom classes and configuration tweaks. You might find a ClassAct or GadTools program that does the same job more safely and economically, if less prettily.

Naive BASICs

BASIC is a great program language for beginners, but inspires dangerously naive coding, among compiler and interpreter writers as well as users. AMOS and Blitz BASIC run-time systems have bugs which risk crashes, especially on expanded systems. Not all programs are affected, but it's wise to run an enforcer to detect those that are.

The Crunch

Floppy disks made it fashionable to compress programs to reduce the size of the executable file; *PowerPacker* and *Imploder* were useful ways to squeeze a quart into pint pot. However these blur the vital distinction between data and program, and were often written without proper regard for CPU caches.

If a program pauses and sometimes crashes when started, it may be badly packed. Try invoking it with your processor cache disabled, using the `CPU NOCACHE` shell command. You should be able to restore full speed with `CPU CACHE`, after unpacking. Run the file through a late version of *Imploder* or *PowerPacker*, extract the original and re-pack it safely. For optimal stability, avoid packers; they introduce avoidable risks and fragment memory.

Kickstart ROM

There are few serious bugs in Kickstart, but screen-swaps between modes at different scan rates can cause lockups. Kickstart 3.1 is a lot safer than earlier versions, but still not perfect, so be cautious when mixing modes. The general problem with AmigaOS is that it is lean and mean. It doesn't waste much time checking its parameters, so if programs pass it nonsense, weird things result. Richard Körber's *PatchWork* guards against these errors.

68060s and PPCs

Commodore never tested AmigaOS on any processor after the 68040, so you're exploring relatively uncharted territory with later chips. The latest fixes are on the CD. PowerUp, WarpUp, *OXYpatcher* and 68060.library try to make these fully compatible, but all bring problems as well as cures. PPC programs often interact badly – if you try to use more than one PPC application at a time, you're living dangerously.

FixGetMsg stops 68060s toggling interrupts faster than they can get a message through to the system. NoBypass is an *AF*-exclusive cure for a race condition when the 68060 tries to run two instructions simultaneously. It's far less costly than disabling Superscalar execution, the previous 'fix' for this problem.

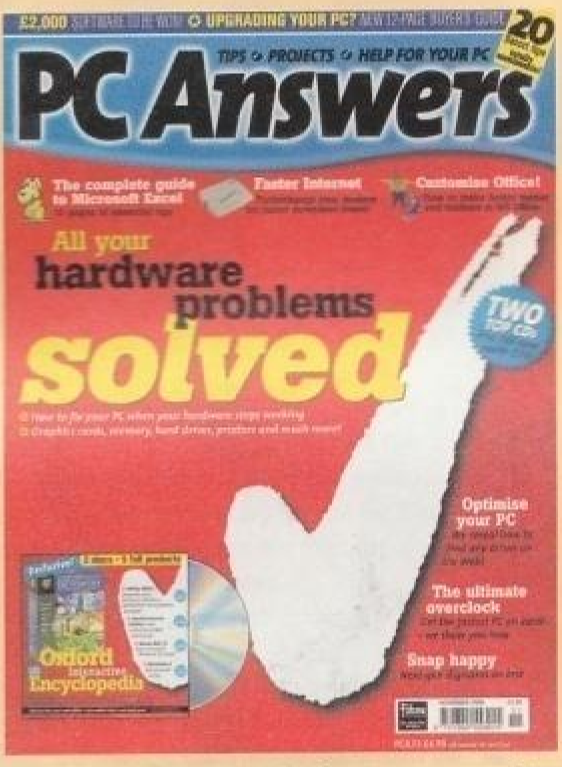
If you've got a PC as well, WE'VE GOT IT COVERED!

PC Format
10 inkjet printers
22 games rated!
CAN YOU FIX IT?

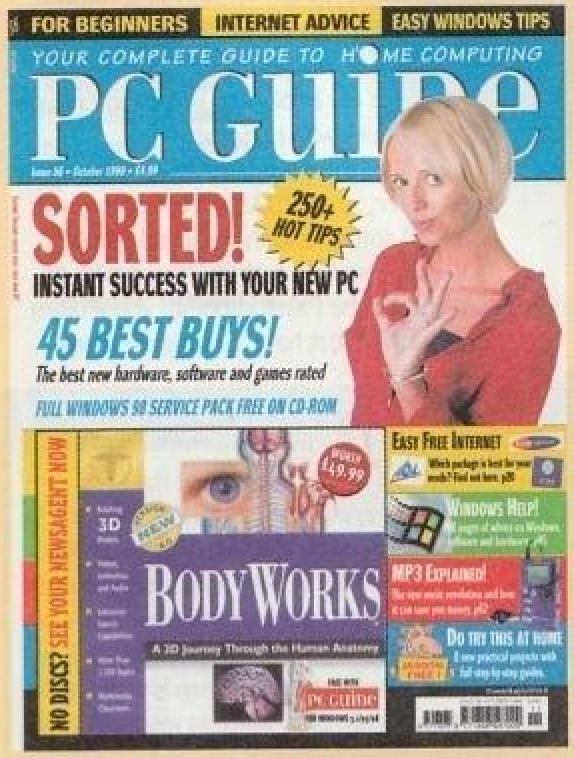
The world's best-selling PC leisure magazine.

SCOOPED!
PC GAMER
DRIVER
GTA 2
TOMB RAIDER

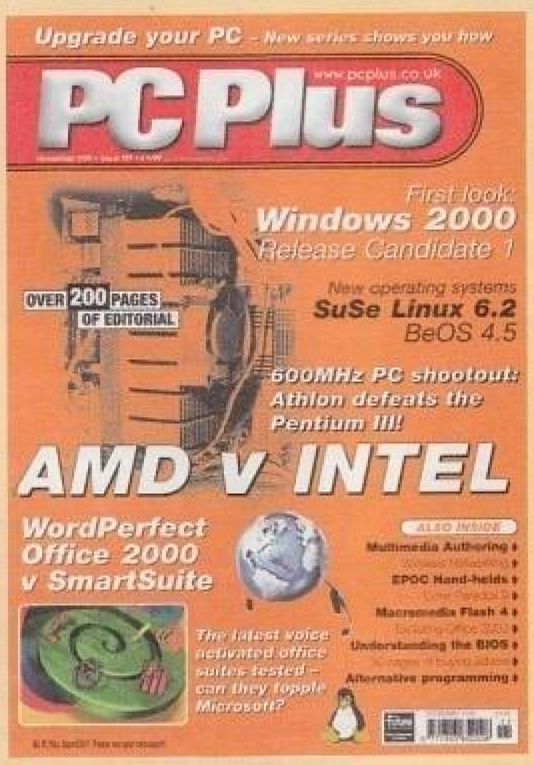
The UK's best-selling PC games magazine.


PC Answers
All your hardware problems solved

The essential guide for anyone who wants to make the most of their PC.


FOR BEGINNERS
INTERNET ADVICE
EASY WINDOWS TIPS
PC GUIDE
SORTED!
45 BEST BUYS!

Everything you and your family need to know about your PC.


Upgrade your PC
PC Plus
Windows 2000
AMD v INTEL

The authority in personal computing.

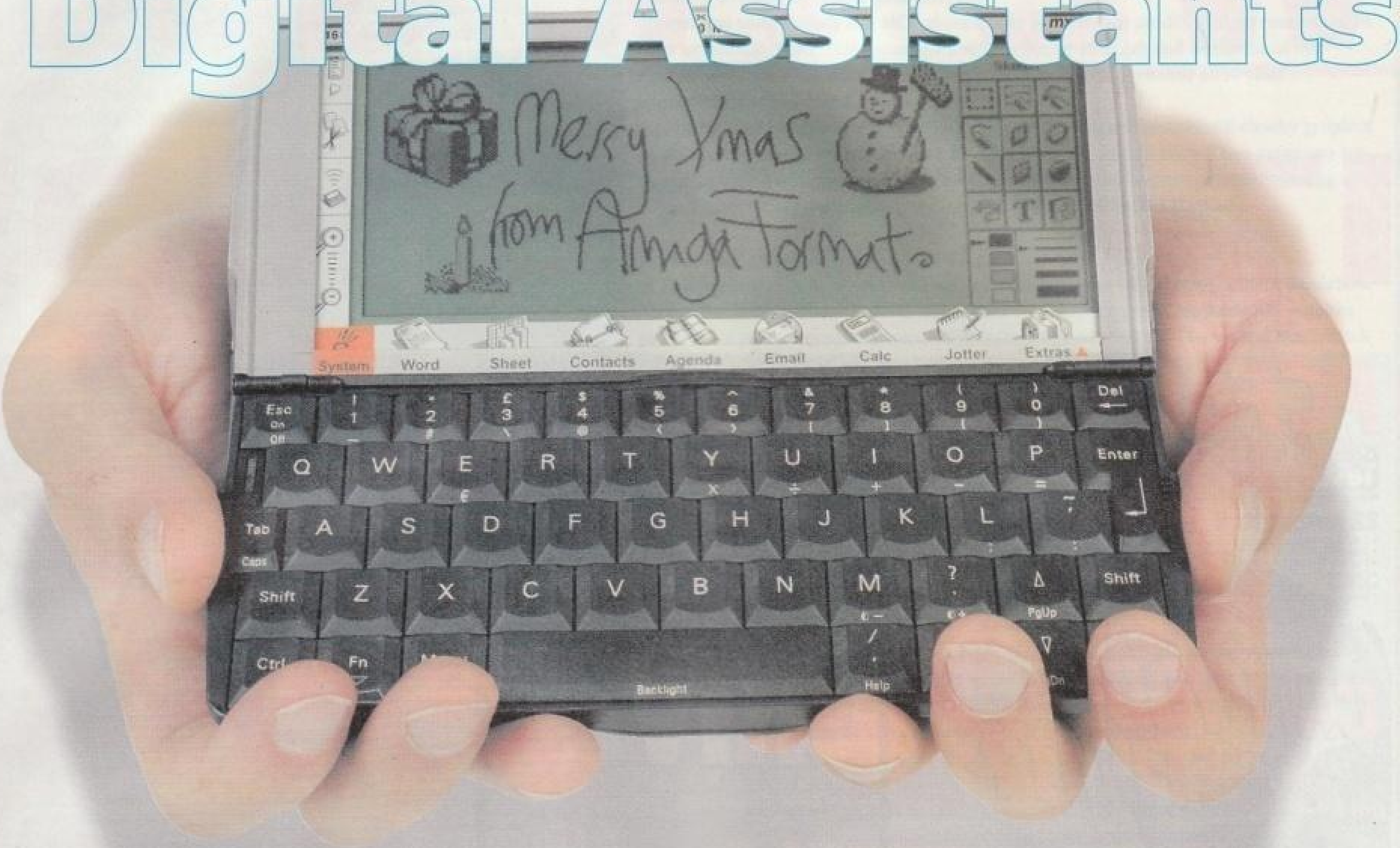
Future
PUBLISHING
Media with Passion

Future Publishing, Beauford Court,
30 Monmouth St, Bath BA1 2BW
Telephone 01225 442244
Fax 01225 446019 WWW:
http://www.futurenet.co.uk

On the CD
-In_the_Mag-/PDAs

Portable Digital Assistants

There's no Amiga laptop, there's no Amiga palmtop, but there are alternatives, as we discover...



Although we don't have our own laptop, leaving aside Simon Archer's valiant attempt at making an A600 portable, there are a number of non-Amiga products that can be used in conjunction with your Amiga to give you computing power on the road. Obviously, you could rush out and gear yourself up with a ninja PC or Mac laptop, but it doesn't really suit the Amiga personality too well, being big, bulky and demanding on power (not to mention expensive). A better bet for most Amiga users would be to try one of the PDAs that can be used with your Amiga. You don't really want to get bogged down with trying to move around Windows or the Mac OS, when you're really an Amiga owner, so these little machines are ideal because the applications and operating systems are simple to use and fairly transparent (mainly because they are intended for complete computing novices). Although the Psions are more technical machines, even having a programming language available, they are still easy to use.

PDAs have operating systems and applications that are simple to use, they will fit inside a jacket pocket and you can add software to them

The other factor that makes them attractive as an adjunct for your Amiga is their portability. Even the largest, heaviest machine – the 5mx – is small enough to fit in an inside jacket pocket, and weighs little more than a copy of the Rough Guide to ooh, let's say, Japan. The smallest – the Palm IIIx – is teeny enough to fit in your jeans pocket, which makes it eminently portable in my book, and is rugged enough to sit in there with no trouble.

One of the main benefits of these PDAs over older, static PDAs is the fact that you can add software to them. Third party software installation on the Psion isn't as easy as for the Palm; although you'll often get archives that have .SIS files in them

A PDA is useful for taking notes, keeping track of phone numbers or even playing games.

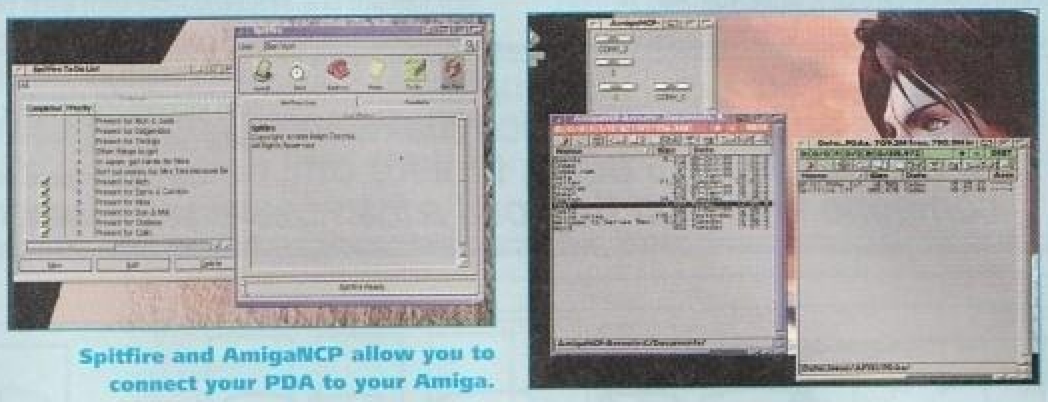
WRITING TEST

To test how fast you could write on the three palmtops, I decided to copy out the first paragraph of text in this feature on each of them. To be fair, I did start with the Palm IIIx, followed by the Psion 3mx then the 5mx, which could account for the speeding up of the times as I got more familiar with the text. As a control, I looked at how long it took me to write out in *Turbotext* on my Amiga as well, which was a little over four minutes. The two Psion's are intended for use on a flat surface as well as in the hand (and are better at it, as the test figures prove), so I did the test twice for them, once cradling the machine in both hands and mainly using my thumbs to write, the other on my desk using as many fingers as I could fit on the keyboards.

AMIGA SOFTWARE

I've concentrated on the Palm Pilot and the Psion machines because you can get software for your Amiga for them. The software for the Psions is called *AmigaNCP* and is a filesystem to allow you to mount your Psion on your Amiga's Workbench. When in action you see nothing more dramatic than a new drive icon on your screen which you can double-click on to get access to the drive (and ROM) of the Psion. Moving files to and fro is easy and the software allows for third party serial cards as well as your Amiga's built-in serial port.

Spitfire for the Palm is a lot more involved. Written by Ralph Torchia, it replicates the built-in applications and allows you to synchronise files between your desktop machine and the PDA. This means that you can update the address book on your Amiga and when you next "hotsync" the Palm, it will check to see where the latest version of the address book files are and either copy them to the Palm, or from it. Doing this synchronisation also means that you always have a reasonably current backup of what's on your Palm, so you don't have to worry about losing all battery power and your data. At the moment, *Spitfire* is only at v0.23, and can be somewhat unstable, but provides an excellent solution.


Spitfire and AmigaNCP allow you to connect your PDA to your Amiga.

(these are Psion installation files, you simply copy them across and double click on them on the Psion), some are just bundles of files that need to be hand-installed, often a fraught process. Likewise downloading software for the Psion isn't as friendly as for the Palm – although there are websites that offer a graphical view of the software along with something of a description, it's nothing like the quality of the websites you can find Palm software on.

Continued overleaf ➡

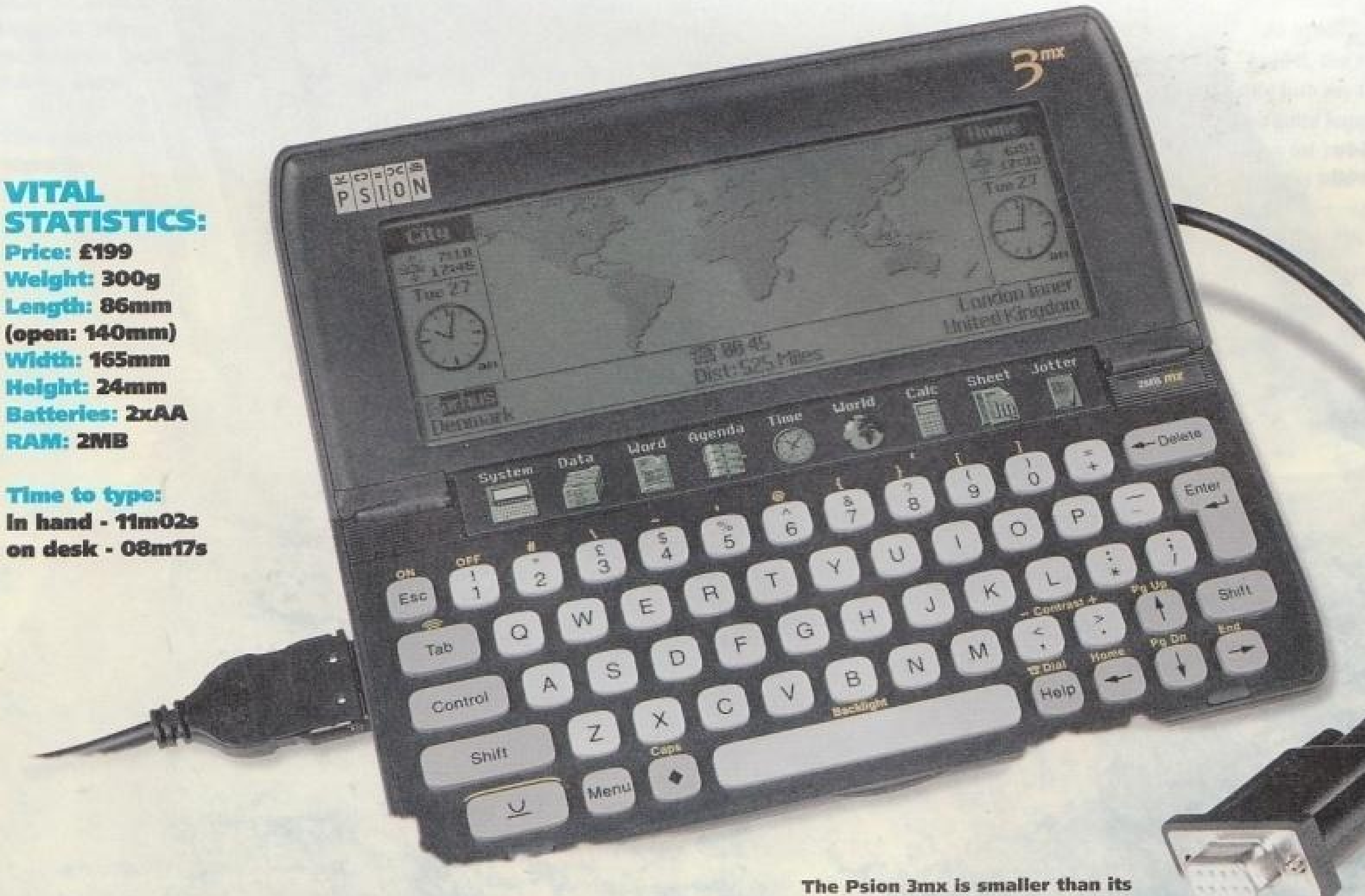
Psion 3mx

The 3mx is the only one of the three PDAs I tried that doesn't have a stylus, or indeed a touch-sensitive screen. This makes things a little more awkward if you wish to select a bit of text, or jump to the third application rather than the second, but is par for the course for this palmtop which is the least satisfactory of the bunch. It has the same high-class applications as the Psion 5mx, albeit cut down somewhat and can also record speech, but with only 2MB onboard (although more can be added to all these machines), there isn't a lot of space for many more third party programs, or for datafiles. While I never felt in danger of exceeding the storage space on the Palm, I got a couple of warnings while trying to install software on the Psion. The flexibility of being able to add more RAM is nice, but hardly makes up for it in what is already an expensive bit of kit. The version of EPOS for the 3 isn't as good as that for the 5 either, meaning that you get the additional trouble of having to deal with the OS. Both the Psion 5 and 3 have their own proprietary format for files, which makes them more awkward than the Pilot for transferring data to and from your Amiga.

VITAL STATISTICS:

Price: £199
Weight: 300g
Length: 86mm (open: 140mm)
Width: 165mm
Height: 24mm
Batteries: 2xAA
RAM: 2MB

Time to type:
In hand - 11m02s
on desk - 08m17s



The Psion 3mx is smaller than its brother, but it's also less useful.

Installing software on the Palm is simplicity itself since the Amiga software *Spitfire* takes care of it while you are hotsyncing the PDA and your Amiga. Also, since the Palm series are all pretty much compatible with each other, you don't have the conflicts that can arise with the Psion series which will sometimes run differing and incompatible versions of EPOC on different models.

Overall the three machines offer different functionality. The Palm is the most portable, although it probably has the weakest suite of software built-in of the three. However, it has a wider range of third-party utilities and games that are extremely easy to download and install. The Psion 5mx is a real computer with real applications, which might just tip it over the end in terms of what's acceptable as a portable replacement for your Amiga. Having said that, its functionality means that it will be an invaluable, if bulky, tool for

> *The Psion 5mx is a real computer with real applications which makes it an invaluable, if bulky, tool for someone who's on the road a lot*

Psion 5

The biggest machine of the three is more of a computer, less of a PDA. It's a bit like one of those big Swiss Army knives - incredibly useful if you want to use all the blades and tools, but a bit inconvenient if you just need a screwdriver or a bottle opened. Rather than being called a PDA, or palmtop, the Psion 5mx would be better off called a sub-notebook. Its tools are also far more developed than on the other machines, with the note pad actually a word processor able to change typefaces, font sizes and styles and offering justification and embedded objects along with a spelling checker and thesaurus (and that's just the word processor). It also comes with a pretty impressive spreadsheet, flat-file database, contact book and agenda. It has 16MB of RAM built-in which allows you to use it as a voice note machine (simply speak into one end of the Psion), but you wouldn't want to (and couldn't) record a speech with it.

In use the 5mx is nice enough and comes with a sonic screwdriver-like stylus, but the keyboard is insubstantial and hard to use, although it's much faster to type on than the 3mx's. The voice note feature is a nice touch and the 16MB RAM is enough to allow it to be useful.

VITAL STATISTICS:

Price: £429
Weight: 380g
Length: 94mm (open: 140mm)
Width: 170mm
Height: 25mm
Batteries: 2xAA
RAM: 16MB

Time to type:
In hand – 11m54s
on desk – 07m40s

16MB
PSION
5mx
Year planner 1999
Sat 27 Mar
System
Word
Sheet
Contacts
Agenda
Email
Calc
Jotter
Extras
11:53
Fri 8
Backlight
Help
PgUp
PgDn
End

The Psion 5mx's stylus looks more like a sonic screwdriver than a tool for swiping the screen with.

someone who's on the road the whole time. The third PDA in our round-up is something of a mixed bag. The Psion 3mx is neither small enough to compete with the Palm, nor flexible enough for it to be a low-cost replacement for the 5mx. It seems more like one of those old-fashioned static PDAs with a limited selection of tools and an unfriendly way of using them. My favourite has to be the Palm. Even though it's not so technically competent as the 5mx, its integration into the Amiga environment is seamless and the fact that *Spitfire* offers converters to export the data from any of the applications built into the Palm as plain ASCII text means that it's more easily integrated into other Amiga applications. The quality of the included software isn't as good as the Psions, but the sheer quantity of third-party stuff makes up for that.

> **My favourite has to be the Palm... it's not so technically competent as the 5mx, but its integration into the Amiga environment is seamless**

Ben Vost

Palm IIIx

There's just the one typing measurement for this one since it makes little difference how you hold the machine to input data. The Palm IIIx may have the weakest suite of built-in software, but there are plenty of third-party replacements for it and its 4MB RAM is plentiful for several of those and more data that you could input. The fact that you can do a lot of inputting on your Amiga and merely transfer it over to the Pilot when you hotsync means that its lack of a keyboard is not a problem for large quantities of inputting. Based on the fact that I wrote a diary on the pilot for two weeks, it has to be said that eventually the pen entry method is a bit wearying, but fast enough for casual use. The Pilot hasn't got any handwriting recognition built in, you have to use a writing system called Graffiti which is easy enough to learn, but may seem a little strange at first. Fortunately, there is an onscreen keyboard if you just can't remember the strokes you need to make, along with online help for all the Graffiti strokes. The size of the Palm is also in its favour.

Where the other two really need an inside jacket pocket to hold it, the Palm IIIx slipped neatly into my front jeans pocket and was quite happy there while I journeyed through Japan for two weeks.

Oh yes, don't be fooled into buying the newer Palm V. Although its looks are nicer, it only has 2MB RAM and recharges from the hotsync cradle making long trips away from the computer impractical.

VITAL STATISTICS:

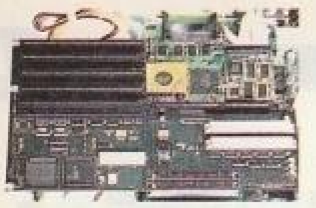
Price: £249.95
Weight: 200g
Length: 120mm
Width: 84mm
Height: 20mm
Batteries: 2xAA
RAM: 4MB

Time to type:
10m53s

Palm IIIx
Address
Calc
Date Book
Expense
Mail
Find
Find: Amiga Format
OK
Cancel

Easy to use and extremely portable, the Palm IIIx wins my vote for having the best price/performance ratio.

Welcome carry over 500 Amiga lines in stock at any time it is impossible to list everything here. If you would like to receive a comprehensive p uct & price listing of Amiga products and accessories, including our latest specials, please se large stamped addressed envelope, or visit our website at www.eyetech.co.uk/AINDEX



Zorro 4 - £119.95 alone - or just £199.95 including an EZTower-Z4

MK 4 EZ-Tower - here with Amiga & PC EZPC-Tower System

BMON/SMON SVGA monitor switcher for AGA & GFx card inputs

Different SMON/BMON Control Options

EYETECH

Eyetech Group Ltd
The Old Bank, 12 West Green,
Stokesley, North Yorkshire,
TS9 5BB, UK
Tel: 07000-4-AMIGA
07000-426-442
+44 (0)1642-713-185
Fax: +44(0)1642-713-634
email: sales@eyetech.co.uk
www.eyetech.co.uk
http://welcome.to/amiga.world

GRAPHIC CARD SWITCHING AT A KEYSTROKE!

A brand new A4000 keyboard adapter (to fit the A1200 or A4000) allows you to use a single keystroke to toggle your monitor between the Amiga's AA chipset output (via a scandoubler/flickerfixer) and your graphics card output (eg BVision) using a single keystroke.

The adapter works in conjunction with either the MK1 or MK2 BMON/SMON range of video switches from Eyetech, replacing the existing manual toggle switch connection.

By default the blank key (which is next to 'return' on international keyboards) is used to toggle the display, but a jumper option allows the F10 key to be used instead. The adapter fully supports all multiple press key strokes and has a microprocessor-controlled reset circuit for proper detection/execution of the 'ctrl-Amiga-Amiga' keystroke combination. The EZKey SE A/B is priced at just £29.95, or £59.95 complete with A4000 keyboard (international model).

Amiga Product Guide

INTERFACES AND ADAPTERS: EZ-KEY, DIY TOWER COMPONENTS

ADPT-EZK2	Mk 2 Amiga/PC k/b adpt -> A1200 kbd direct connect	28.95
ADPT-EZK2-W95	Mk2 Amiga/PC k/b->A1200 dir connect +Win95 kbd	38.95
ADPT-EZSE-A	EZKey-SE Amiga 5p DIN k/b adapter for A1200/A600	18.95
ADPT-EZSE-A/K	EZKey-SE Amiga + 6p->5p adptr + A4000 kbd bundle	48.95
ADPT-EZKSE-P	EZKey-SE PC 5p DIN k/b adapter for A1200/A600	24.95
ADPT-EZKSE-P/K	EZKey-SE PC k/b adapter for A1200/A600 + Win95 kbd	34.95
ADPT-HD-2/3	2.5"/44way->3.5"/40w+4w adpt & 2.5->3.5 mtg bracket	11.95
ADPT-HD-3/5	3.5" Zip/SyQuest/FDD/HD brkt/pl ->5" bay	5.95
ADPT-KBD-5P6P	Amiga/PC k/b adapter 5p din-F ->6p m/d-M	5.95
ADPT-KBD-6P5P	Amiga/PC kbd adapter 6p mindin-F ->5pd-M	5.95
ADPT-TWR-AF5IN	Engraved 'AMIGA' faceplate for 5.25" tower bay	4.95

INTERFACES AND ADAPTERS: A1200 ETHERNET, SCSI

ADPT-PCM-ETH-C	PCMCIA ethernet card inc. motherboard CC_RESET fix	79.95
ADPT-PCM-ETH-H	Hydra PCMCIA ethernet card with Amiga drvrs inc. fix	129.95
ADPT-PCM-ET-Z2	Hydra Z2/Z3 Ethernet Card	99.95
CAB-UPT-X60C	Crossed twisted pair/RJ45 for Sisys 60cm	6.95
CAB-ETH-3M	Ethernet Coax + 2 x terminator 3 metres	9.95
ADPT-SCS-CSQR	Classic Squirrel PCMCIA SCSI i/f 50pCM	69.95

INTERFACES& ADAPTERS: FLICKERFIXERS, GENLOCKS, VIDEO DIGITISERS VGA ADAPTERS, MONITOR SWITCHES, MONITOR LEADS

ADPT-VGA-BMON/F	SVGA Monitor Switcher-BVision/CVision & EZVGA INFF2	39.95
ADPT-VGA-BMON/V	SVGA Monitor Switcher-BVision/CVision & 15pHD In/Ex SD/FF	44.95
ADPT-VGA-BMON/A	M/Sync Monitor Switcher - BVision/CVision & 23p RGB socket	44.95
ADPT-VGA-SMON/F	SVGA Mon Switch - Ateo/Picasso 15pHD Gfx & EZVGA INFF2	44.95
ADPT-VGA-SMON/V	SVGA Mon Switch - Ateo/Pic'o 15pHD & 15pHD In/Ex SD/FF	49.95
ADPT-VGA-SMON/A	M/Sync MonSwitch - Ateo/Pic'o 15pHD & 23p RGB socket	49.95
ADPT-VGA-AMON	Auto Amiga/CV64-3D m/sync monitor switch	39.95
ADPT-VGA-M2SD	EZ-VGA-Mk2 compact external s/doubler PLL u/gradable	69.95
ADPT-VGA-PLFF	EZ-VGA-Plus compact external SD+FF 23F-15F PLL	99.95
ADPT-VGA-SDUG	ADPT-VGA-M2SD to PLFF upgrade	40.00
ADPT-VGA-INSD	EZ-VGA internal A1200 s/doubler non-upgradable	48.95
ADPT-VGA-INSD2	EZ-VGA internal A1200 s/doubler for use with BMON	59.95
ADPT-VGA-INFF2	EZ-VGA internal A1200 SD+FF BMON compatible	89.95
ADPT-VGA-SEFF	EZ-VGA-SE scandoubler+flickerfixer 23F-15F Xtal	89.95
ADPT-VGA-15M23M	VGA 15pHD-M -> 23pD-M Amiga RGB adapter	14.95
ADPT-VGA-UNBF	Amiga 23pD-F ->15pHD-F VGA adapter	12.95
ADPT-VGA-BUF	Amiga 23pD-F ->15pHD-F buffered adapter for A4000	16.95
ADPT-GLK-COMP	EZ-Gen composite video Genlock for A1200	49.95

INTERFACES AND ADAPTERS: A1200 SOUND CARDS & SOFTWARE

INT-AUD-PL12-DT	Prelude1200 for A1200 DT console only	129.95
INT-AUD-PL12-TW	Prelude1200 for Tower w/ribbon cble/audio I/O brkt, CD i/f	149.95
INT-AUD-PLZ2	Prelude ZorroII 16-bit full duplex sound card	189.95
ASW-SMP-OP	Samplitude Opus 16 channel, virtual projects, FFT filtering	149.95
ASW-SMP-LE	Samplitude-LE 4 channel, virtual projects, FFT filtering	49.95

INTERFACES & ADAPTERS - IDE/ATAPI & SOFTWARE

INT-12I-EZCD4	Mk4 4-dev buf IDE i/f w/AIPU w/A1200 CDROM s/w	28.95
INT-12I-EZCD4/C	Mk4 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	38.95
INT-12I-EZCD4/CE	Mk4 4-dev buf IDE i/f w/3x40, 2x44 cabs, EZIDE	48.95
INT-12I-EZCDSE	Economy 4-dev buf IDE i/f w/A1200 CDROM s/w	18.95
INT-12I-EZCDSE/C	Econ 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	28.95
INT-12I-EZCDSE/CE	Econ 4-dev buf IDE i/f w/3x40, 2x44cabs, EZIDE	38.95
INT-4KI-CD4	4-device EIDE i/f for A4000 w/CDROM s/w	18.95
DVR-EZIDE	EIDE/ATAPI HD/CDROM/ZIP/LS120/SyQst drvr	34.95
DVR-EZIDE-CU	P/x upgrade to EZIDE from competitive product	
DVR-EZIDE-SP	EIDE/ATAPI enhancer/CDROM Software Bundle Price	

INTERFACES & ADAPTERS-SERIAL, PARALLEL, FLOPPY, CLOCK PORT EXPA

INT-SER-PTJR	PortJunior Mk2 - 460KB hi-speed serial i/f for A1200
INT-12I-PTJR-SP	PortJun Mk2 purchased with CamControl s/w or KBPlus
INT-IOBL-S12	IOBlix 12S - 1.5Mbps serial i/f for A1200
INT-IOBL-P12	IOBlix 12P - EPP par. port supports Mustek scanners
INT-SER-PTPL	PortPlus Mk2-2x 460KB ser + 1x800KB par i/f
INT-IOBL-Z2	IOBlix Z2 - 4x1.5Mbps ser + 1x EPP par port ZorroII
INT-IOBL-Z2PX	1x EPP par port expan for INT-IOBL-Z2 (to 4xs+2xP)
INT-CLK-EXP	ClockUp 4-way clock port expander for A1200
INT-FDD-DF0	Interface for std Sony FDD for DF0 880KB

CABLES & CABLE ADAPTERS: SERIAL, MODEM, SCSI, PRINTER

CAB-SER-EX2M	DB25-M -> DB25-F RS232 extn cab 2m for modem
CAB-SER-EX50C	DB25-M -> DB25-F RS232 extn cab 0.5m for modem
CAB-SER-NUL2M	Null modem cable w/ D9F & D25F at each end 2m
CAB-SER-NUL5M	Null modem cable w/ D9F & D25F at each end 5m
CAB-SER-NUL10M	Null modem cable w/ D9F & D25F at each end 10m
ADPT-SCS-50/50CF	Centronics 50p-F to Centronics 50p-F (for Squirrel)
CAB-SCS-25D/50C	SCSI cable DB25-M to Cent50-M 1m
CAB-SCS-25D/25D	SCSI cable DB25M to DB25M mac type 1m
CAB-SCS-50C/50C	SCSI cable Centr50M to Centr50M 1m
CAB-SCS-50H/50C	SCSI-2 cable 50h/pDM to Centr50M 1m for PPC
CAB-SCS-50H/25D	SCSI-2 cable 50h/pDM to 25D-M 1m for PPC
CAB-PAR-FULL	Bidirectional printer cable all pins connected

CABLES & CABLE ADAPTERS: VGA, KEYBOARD, SWITCHBOXES, CABLES, SCART CABLES (SEE ALSO BMON, SMON, VGA SWITCHERS AB

CAB-KBD-MF	5p DIN M - 5p DIN F k/b ex cable 1.2m
CAB-VGA-MF	15p DM-HD - 15p DF-HD VGA ext cable 2m
CAB-VGA-MM	15p DM-HD - 15p DM-HD VGA cable 2m
ADPT-SCAR-CMP	Amiga comp video (RCA)+2xAudio to SCART
ADPT-SCAR-RGB	Amiga 23p+2xRCA to RGB TV SCART + audio

CABLES: HD, CDROM, FLOPPY, CLOCK PORT DATA, A1200 HD POWER

CAB-PD-40F44F	2.5" (44F) to 3.5" (40F) data cab adapt for A1200 30cm
CAB-PD-2F	Power splitter floppy drive to hard drive + floppy
CAB-PD-30C	44 to 40way 3.5" HD data & pwr cabs - A1200
CAB22-2W-10C	22way-F x2 A1200 clock port cable 10cm o/a
CAB34-2W-50C	34way-F x2 FDD ribbon cable for tower 50cm
CAB40-2W-20C	40 way IDE cable 2 connector 20cm
CAB40-3W-1M	40Way IDE/HD/CD cable 3 connector 1m o/a len
CAB40-3W-60C	40w-F x3 HD/CD/IDE cable 20+40=60cm o/a
CAB40-DDC	A1200 IDE skt adptr 40F-40M with mtgs 15cm
CAB40-CUST	Custom cable 3x40way IDE up to 1.5m
CAB44-2W-13C	44way (2.5" HD) cable 2 connector, 13cm o/a
CAB44-3W-24C	44way (2.5" HD) 7+17cm,3 connector,24cm o/a
CAB50-CUST	Custom cable 50way SCSI 60cm w/4 x Cent or IDC con'trs

CABLES: HD, CDROM, FLOPPY POWER SPLITTERS-TOWER SYSTEMS

CABPW-1W-1F	Power converter cab HD-M -> FD-F
CABPW-2W-1H1F	HD/FD power splitter HD-M->1xHD-F/1xFD-F
CABPW-2W-2F	FDD power splitter 4pM->2xFD-F
CABPW-2W-2H	HD/CD power splitter 4p-M ->2x 4p-F 15cm

ISDN TERM ADAPTERS, 56K MODEMS & NET ACCESS BUNDLES

NET-ISP	One time setup/support/unlimited usage/no ongoing net access charge (0845 call charges only) with 25MB web space, 10 email addresses, free with any modem
NET-EYE-1	128Kbps ISDN T/A + NET-ISP as above
NET-EYE-3	128K ISDN T/A, Netconnect + NET-ISP
NET-EYE-5	56Kb fax/voice modem + NET-ISP as above
NET-EYE-7	56Kb fax/voice mdm, Netconnect + NET-ISP
NET-REF	Internet Reference Book by D. Winder, free with above
NET-NC	Netconnect software

CDROM SYSTEMS INCLUDING EZ-TOWER & MT/DT BUNDLES

CD-SE-24X	CDPlus-SE system 24 speed with CDROM s/w
CD-SE-32X	CDPlus-SE system 32 speed with CDROM s/w
CD-DT/MT-24X	CDPlus Desktop/Minitower 24 x with CDROM s/w
CD-DT/MT-32X	CDPlus Desktop/Minitower 32 x with CDROM s/w
ADPT-AUD-CDSE	CDPlus-SE A1200/CD audio mixr/adapter
CAB44-CD-13C	44way (2.5" HD) cable purch with CD/HD 13cm
CD24-BARE	Bare 24 speed CDROM mechanism for twr/A4k
CD32-BARE	Bare 32 speed ATAPI CDROM mechanism for twr/A4k

CHRISTMAS SPECIALS ...

NEW! Turboprint v.7.05. - £38.95; Dimage V Digital Camera - £259 Elbox 32-bit IDE Flyer - £49.95; Scandoubler/Flickerfixer & 240w spea with FREE Colour Monitor - £124.90; EZ-Gen Genlock - £49.95; 7-slot

UK Bank/BS cheques, Visa*, Mastercard*, Switch, Delta, Connect, Solo, Electron. Postal/Money orders accepted. (* 3% clearance charge applies to a card orders). Due to space limitations some of the specs given are indicative only - please ring/write for further details. Please check prices, specificat availability before ordering. If ordering by post, please provide a daytime telephone

ITER/REWRITER SYSTEMS INC. EZ-TOWER & MT/DT BUNDLES

BARE-2216	EZReWriter Mechanism (no MakeCD)	139.95
N-2216	EZReWriter 2x2x16 w/MakeCD for A4k,Twr	179.95
SE-2216	EZReWriter-SE external 2x2x16 w/MakeCD	219.95
PL-2216	EZReWriter-Gold external 2x2x16 w/MakeCD	299.95
	above available with faster 4.2.8 mechanism for £20 extra	
SE-UG	EZCD-SE+40+44way cabs + CDROMs/w w/CDR	20.00
M4-UG	EZCDMk4+40+44way cabs + EZIDE s/w w/CDR	30.00
K-10	Recordable CD media (WORM) 650MB x10	19.95
DSK	Single CDrewritable disk 650MB	9.95
CD-TAO-P	MakeCD TAO (P) Amiga CD rec s/w w/ATAPI	38.95
	media half price when purchased with above	

VERZ4 SYSTEMS, Z4 BUSBOARD EXPANSIONS - 7 CARD SLOTS

TZ4-PL	RTU EZTower-Z4 230W PSU, EZKey, FD cab/fp	99.95
TZ4-PLZ4	RTU EZTwr-Z4 230W, PC kbd adpt, FD cab/fp, Z4 slots	199.95
4	Z4 adapter for A1200 5xZ2, 2xZ4, 2xclock ports	149.95
4-SP	Z4 adapter as above - until 30/11/99	119.95
T-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00

VER SYSTEMS, MINITOWER/DESKTOP CASES & ACCESSORIES

T-RTU-PLUS	Ready-built EZTwr w/250W, EZKey, FD cab/fp	99.95
T-sp	MiniTower case wth 200W+ psu for HD/CDROM	19.95
T-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00
T-EXKT	EZ-Tower conversion kit - No PC Tower	39.95
UD-EZTW	EZTwr audio mixer/adapter for A1200/CDROM	14.95
CSI-EZTW	EZTwr SCSI adpt 30cm 2xCent50F, 1xIDC50F	14.95
R-SSQ	9pDM->9pDF SurfSquirrel EZTwr serial extn cable 50cm	9.95

MONITORS- REQUIRE SD AND/OR FF TO USE ALL AMIGA MODES

5-.28	15" dig SVGA 0.28DP 1024x768@60Hz	119.95
7-.27	17" dig SVGA 0.27DP 1280x1024@60Hz	199.95
7-.25	17" SVGA 160MHz,0.25DP,1600x1280@75Hz Diamondtron	399.95

Deduct 10% from the price of scandoublers/flickerfixers bought with monitors

AL CAMERAS AND AMIGA DIGITAL CAMERA SOFTWARE

IN-DMV	Minolta Dimage-V digicam w/psu case 2MB card CamC'trol	259.95
IN-DMV-SM2	2MB Smartmedia card for Minolta Dimage-V digital camera	14.95
IN-DMV-B40	40 x AA alkaline cells for Minolta Dimage-V digital camera	24.95
AM-CAS	CamControl s/w for Casio, Fuji, Kodak, Minolta, Olympus	29.95

CATION SOFTWARE & DRIVERS

L4D	Aladdin 4D	59.95
FX4	ImageFX v4	149.95
FX4-PPC	Powerstation PPC modules for IFX4	74.95
FX4-UG2/4	ImageFX 4 upgrade from IFX v2x	99.95
FX4-UG3/4	ImageFX 4 upgrade from IFX v3x	74.95
F	Wildfire 68k/PPC	99.95
M400	Scala MM400 on CD	59.95
M400-UG	Scala MM400 on CD with u/g from MM300	39.95
BPR7	TurboPrint 7.x Amiga printer driver (English)	38.95
B6/7-UG	TurboPrint 6.x to 7.x upgrade (send TB6 disk with order)	19.95
CV4	Ultraconv 4 Graphics, animation & effects Amiga s/ware	29.95

A SCANNERS & SOFTWARE, ADAPTERS

BA4-BDL3	UMAX SCSI A4FB 1220S scanner & PScope, ArtEffects	169.95
BA4-BDL3	UMAX SCSI A4FB 610S scanner & PScope, ArtEffects	149.95
Q4	ScanQuix4 + 1 driver (Epson/HP/Artec/Mustek)	49.95
Q4-U	ScanQuix4 + 1 driver (UMAX)	79.95
Q4-UG	ScanQuix3 to SQ4 upgrade (trade-in & receipt reqd)	29.95
HS	PhotoScope UMAX-SCSI Amiga Scanner Driver	59.95
SQ3-PAR	SQ3 adapter Epson scanner ->parallel port cable	9.95
	50% off all SCSI cables purchased with scanners	

& FLOPPY DRIVE, CDROM, LS120 & ZIP MECH. & CASES

L-1200	Replacement A1200/600 int FDD 880KB	24.95
L-BARE	Bare 1.44/880 Sony FDD for tower (needs EZDFO/Catwsl)	19.95
L-D/C/I	Twr int 880Kb FDD(Sony/EZDFO/cab bundle)	29.95
L-D/I	Twr intl 880Kb FDD (Sony/EZDFO) No cable	24.95
21	21MB 2.5" hard drive 90 days warranty	29.95
170	170MB 2.5" hard drive	49.95
260	260MB 2.5" hard drive	59.95
2	3.2GB slim 2.5"drive 9mm high (2 fit in std A1200)	149.95
2	3.2GB 1"x3.5" IDE drive for tower	99.95
3	4.3GB 1"x3.5" IDE drive for tower	109.95
72	17.2GB drive for EZPC system or IDE Flyer	199.95
LS120	Panasonic LS120 Floppy/Optical 1.4/120MB	79.95
LS120-CT3	3-pack of 120MB (nominal) LS120 carts	29.95
-CD-13C	44way (2.5" HD) cable purchased with CD/HD 13cm	6.00
ZIP	Metal slim case-FDD/IDEZip/SyQuest/LS120	9.95
HD-ECON	External 3.5" HD case no psu	19.95

ARDS, MICE, PSU'S, PRINTERS, MISC. HARDWARE

60MM	Cooling fan for A1200 60x60x25mm 5/12v	14.95
		9.95
		39.95
KBD-IR/A	KBPlus Infrared keyboard with EZKey SE/P Interface	59.95
KBD-A1200	Replacement A1200 k/b w/ribbon cable	24.95
KBD-A4000	A4000 keyboard with 5-pin DIN plug	34.95
KBD-WIN95	Windows 95 keyboard with 5-pin AT DIN plug	12.95
MOU-WHI	Amiga Mouse	6.95
PRT-B&W-FUJ	Fujitsu portable thermal printer w/ribbon & PSU	29.95
PRT-B&W-FUJ-RIB	Replacement thermal transfer ribbon for PRT-B&W-FUJ	4.95
PRT-B&W-FUJ-BAT	NICD rechargeable battery for PRT-B&W-FUJ	14.95
PRT-B&W-FUJ-PPR	100ft x 8.5" Thermal paper for PRT-B&W-FUJ	4.95
PSU-100	100w PSU for Amiga (fit your old lead w/instrns,connect's)	29.95
PSU-200	200w PSU for Amiga (fit your old lead w/instrns,connect's)	39.95
PSU-230	200/250w replacement PSU for MT/DT/FT	29.95
PSU-A1200	A1200 23W PSU (original) 90 days warranty	19.95
SPK-60W-INT	5.25" Bay Internal mounting 60W PMPO speakers/amp	24.95
SPK-240W	240W PMPO speakers w/ PSU 3.5mm jack, AC mains PSU	24.95
SPK-600W	600W PMPO AC/mains spkrs w/ subwoofer	49.95

ACCELERATORS: POWERPC G4 ACCELERATORS

Blizzard G4 & Cybervision NG - lowest prices - advance orders are being taken now!

ADPT-PWFD-PPC	2nd A1200 m/bd powerfeed for PPC acc : PSU to PPC fan	14.95

ACCELERATORS: APOLLO 680XX

ACC-060-75LC	Apollo '060 MMU 75MHz A1200 acc (lim avail)	249.95
ACC-060-66	Apollo '060 MMU/FPU 66MHz A1200 acc (lim avail)	349.95
ACC-060-50	Apollo '060 MMU/FPU 50MHz A1200 acc (lim avail)	264.95
ACC-040-40	Apollo '040 MMU/FPU 40MHz A1200 accel	184.95
ACC-040-40-SE	Apollo '040 MMU/FPU 40MHz A1200 accel (20% o/c)	164.95
ACC-040-28	Apollo '040 MMU/FPU 28MHz A1200 accel	124.95
ACC-030-40-1S	Apollo '030 MMU/FPU 40MHz A1200 accel 1 simm skt	59.95
ACC-030-40-2S	Apollo '030 MMU/FPU 40MHz 2 simm skt	69.95
ACC-4/60-SSKT	Apollo 1230/40/60 2nd simm socket & fitting	20.00

MEMORY: SIMMS, ZIP RAM, FPU'S-PLEASE RING FOR LATEST PRICES

MEM-32MB-72P	72 pin 32MB 32 bit simm 60ns for Amiga (+£10 for 1-sided)	79.95
MEM-16MB-72P	72 pin 16MB 32 bit simm 60ns for Amiga	44.95
MEM-8MB-72P	72 pin 8MB 32 bit simm 60ns for Amiga	19.95
MEM-4MB-72P	72 pin 4MB 32 bit simm 70ns	9.95

WB DISKS, KICKSTART ROMS, MANUALS ETC

SYS-WB30-DSK	Amiga WB3.0 disksx5 + Eyetech HD install	9.95
SYS-WB31-DSK	Amiga Workbench 3.1 disks x6 (w/ HD inst)	14.95
SYS-KS31-ROM	A1200 Kickstart 3.1 ROM chips (2 chips)	29.95
SYS-KS31-SET	A1200 K/s 3.1 ROMs & WB3.1 dskx6 (no manuals)	36.95
SYS-WB35-CD	Amiga Workbench 3.5 O/S with free internet connect	34.95
SYS-KS31-MPUG	A1200 Mag Pk u/g 3.1ROMs,WB3.1,appln s/w, manuals	44.95

EZPC-TOWER & SIAMESE SYSTEMS & COMPONENTS

EZPC-SLE-CF1	EZPC SiSys RTG2.1entry level system	599.95
EZPC-HSE-CF1	EZPC SiSys RTG2.5 system Home Studio Edition	999.95
EZPC-DVE-CF1	EZPC SiSys RTG2.5 system Digital Video Edition	1369.95
EZPC-XLS-CF1	EZPC SiSys RTG2.5 system - ultimate Amiga expansion	1999.95
EZPC-AMP-CF1	A1200 Magic Pack/24x/3.2GB/etc EZPC-Tower upgrade	399.95
EZPC-SLE-CF1-UG	EZPC SiSys RTG2.1entry level u/g (no EZTWR/kb/adpt)	499.95
PSW-W9X/SS	Windows 9x & Lotus SmartSuite bundle	99.95
SYS-SIA-ETH	Siamese System2.5 w/PC, Amiga ethernet	189.95
SYS-SIA-R25	Siamese System software RTG v2.5	99.95
SYS-SIA-R21	Siamese serial s/w RTG v2.1 (ref'ble agnst v2.5)	19.95
SYS-TCP-MIA	Miami TCP/IP stack for Amiga (reg'n fee paid)	24.95

CD32, SX32 & ACCESSORIES

SX32-MK2	SX32 Mk2 Ram/Clock/FPU expander for CD32	149.95
SX32-P40EC	SX32 Pro 030EC/40MHz Acc/Ram/Clk/FPU to 64MB	199.95

A1200 MAGIC PACKS, ACCESSORIES AND UPGRADE BUNDLES

AMP-STR-FDD	A1200 Starter Magic pack FDD vers /w s/w	179.95
AMP-STR-HD2	A1200 Starter Magic pack w/170 HD, EZCD i/f, skt & s/w	248.95
AMU-STH2-CDUG	24 x CDROM upgrade for AMP-STR-HD2 w/PSU	59.95
AMU-PRO-LS120	LS120 120/1.44/0.72MB drive ug w/PRO-PK3	74.95
AMT-LE	FDD Magic Pack in EZTower	299.95
AMT-PS4	EZTower PS/4, 24xCD, 3.2, 030/40, MMU, FPU, 8mb	549.95
AMT-PS4-XLS	EZTower PS/4XLS, 3.2, 040/28, 240w speakers	669.95
AMT-SE	EZTower-SE,32x,3.2,LS120,040/28,16mb,EZVGA,15"mon,240w	999.95
AMT-SE-XLS	EZTowerSE-XLS, as AMT-SE w/17"mon,Prel12TW,CDRW,600w	1799.95

TOOLS, TEST EQUIPMENT, MOTHERBOARDS & WORKSHOP SERVICES

PT-MBD-1200	Replacement A1200 m/b w/VID & RST fixes (no ROMs)	129.95
FIT-EZ-MAIN	A1200 to EZ-Tower fitting - A1200 + floppy drive	30.00
FIT-EZ-XTRA	Fitting/testing per customer-supplied periph into EZtwr	7.50
REP-AM-2B/1D4	A1200 m/b rev 2B or 1D4 manfact'g bus timing fault fix	30.00
REP-AM-PCMRST	A1200 motherboard CC_RESET manfacturing fault fix	30.00
REP-AM-VID	A1200 m/b VGA-modes video tearing manfact'g fault fix	30.00

Discount for more than 1 fix carried out at one time on motherboards

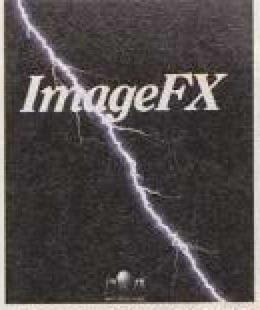
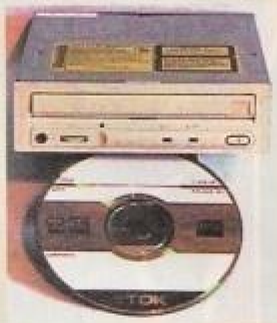


Image FX4, £149.95



EZReWriter 2x2x16, from £139.95

EZVGA Scandoubler/Flickerfixers from £48.95

UMAX 610S A4 SCSI Flatbed Scanner, with Photoscope, ArtEffect £149.95; 1220S - £169.95

Monitors from £39.95

EYETECH

UK Next Day from
Despatch Insured
Delivery Charges

Software/Cables, EZCD I/F = £3.00;
2.5" Drives, Accel'tors, Manuals = £7.00;
3.5" Drives, FDDs, PSUs, SX32 = £9.00;
CDPlus, Minitower, Desktop = £11.00;
EZTW, EZPC, Monitors alone = £15.00,
Tower systems with monitors = £23.00
Worldwide in 2-7 days on receipt
of faxed order & payment details

ZTower & Z4 board - £199.95; CDReWriter 2x2x16 bare mechanism for towers - £139.95;
max 1220S A4 Scanner w/ Photoshop & ArtEffect - £169.95; Umax 610S Bundle - £149.95;
eline Direct Newsletter £6 UK & EC - £12 W/W; Engraved AMIGA 5.25" Faceplate - £4.95

1D.1 motherboard - other boards may need modification. Items subject to mechanical wear & tear (eg keyboards) are limited to 90 days warranty on those ponents. E.&O.E. All prices include VAT at 17.5%. Orders sent outside the EC do not incur VAT - divide the prices shown by 1.175 to arrive at ex-VAT prices. are offered subject to availability and our standard terms & conditions, copies available upon request.

Screen Play

What a disappointing month for Amiga gaming! Here we are with the Christmas issue, with only one game to review. Granted, *Virtual Grand Prix* is a quality title, as you can see from the review over the page, but it's not going to be everyone's cup of tea. It's not all, bad though. Santa's sack could still be bulging in time for Christmas. The imminent *Whale's Voyage 2* looks as though it could offer heaps of in-depth gaming, and the good people at Alive Mediasoft assure me that there are plenty of games on the way, including the long awaited *Putty Squad*. Best of all, there's news afoot of a new project by clickBOOM, and can you remember the last time they released a duff game? Thought not.

Most of the games in our Previews pages may not be that close to completion, but it seems to me that there's plenty of innovation and dedication still being applied to the Amiga games market. So – when you're feeling in the dumps, don't be silly chumps, just purse you're lips and whistle, that's the thing. Look on the bright side, folks!

Paul Cavanagh

SCREENPLAY INDEX

30 Previews
You don't even have to make the effort to turn the page, it's all right here for you.

32 Virtual G.P.
If tweaking tuning ratios and balancing tyres is your thing, look no further.

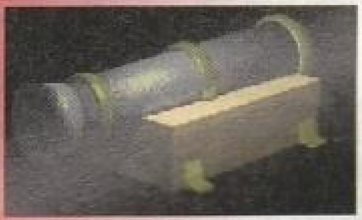
34 GameBusters
Wasted Dreams giving you grief? Fear no more! Part one of our walkthrough has arrived.

36 Reader Games
Oooh goody, it's your Christmas gifts to us and the other readers. Ta very much.

Previews

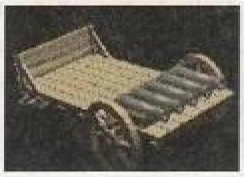
There are a lot of exciting projects in development at the moment and we kick off with three very different games from Pagan Software

WORK IN PROGRESS
WORSHIP OR DIE
MAGICK



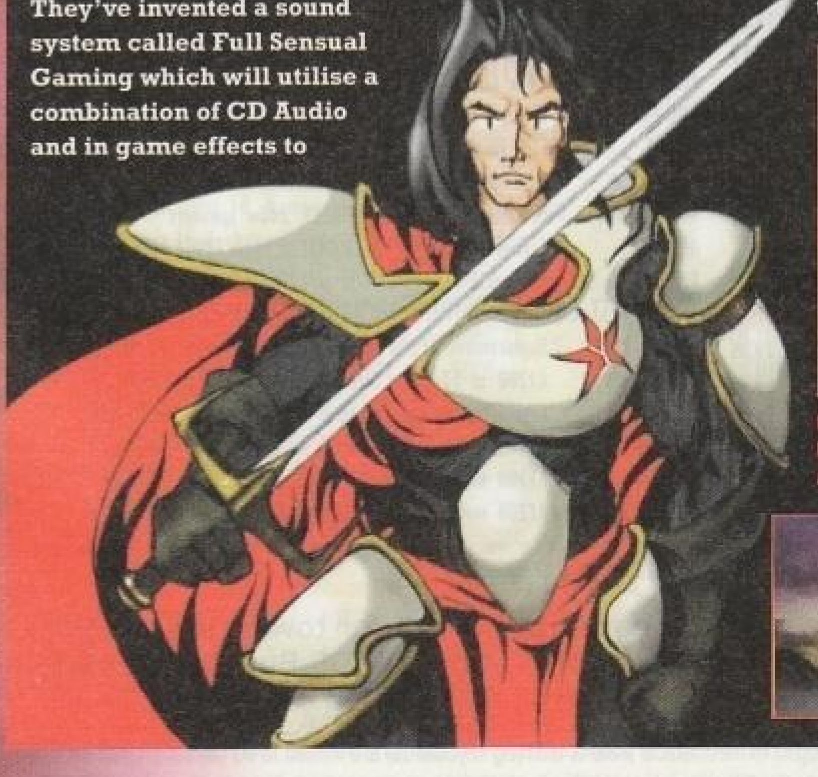
I think that I've done rather too many jokes about big weapons recently, don't you?

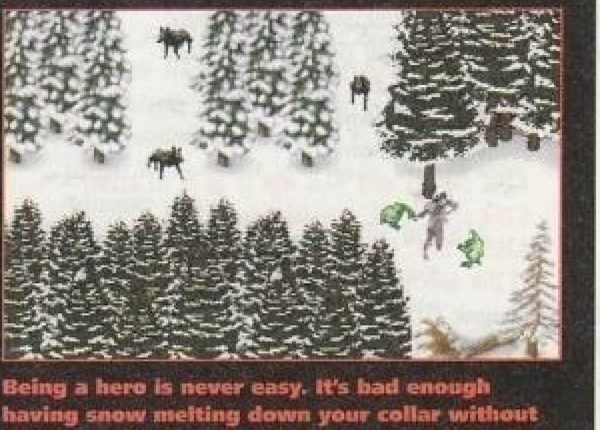
There's not a great deal of detail available for this first person strategic combat game at the moment as it's still in its early days of production. What we do know is that you'll be needing a PPC and a graphics card to cope with the real-time 3D graphics engine. Given this, it should be lightning fast and look truly glorious. At least three different perspectives will be on offer, with a top-down birds eye view, a *Tomb Raider* style over-the-shoulder option and your good old *Doom* type first person perspective. These screen shots don't give away a lot, but bear with us for more news.



Hell Spawned, Hell sent...
Dafel: Bloodline

Since we last looked at this game, Pagan have released more details. The top-down perspective RPG is looking to be a real corker with an innovative sound system, along with 256 colour graphics and an average of 400 frames of animation for each character in the game. You'd think that you'd need a really high-spec Amiga to run this sort of game, but you'd be wrong. According to Pagan, as long as you've got at least 8MB of fast RAM the game will run really well, even on an '030 AGA Amiga. They've invented a sound system called Full Sensual Gaming which will utilise a combination of CD Audio and in game effects to simulate surround sound via a standard stereo output. The general upshot of all this is that you'll be able to hear whereabouts enemies are, and use the sounds to track them. Splendid. If you consider that Pagan have developed this system in tandem with a custom graphics routine, you can start to understand how much hard work and imagination is going into this game. The gameplay looks promising too, being largely non-linear, and containing sub-plots. Pagan have promised us a work in progress report which we hope to have for our next issue.





Being a hero is never easy. It's bad enough having snow melting down your collar without all these wolves and ghastly green goblins. Bah!

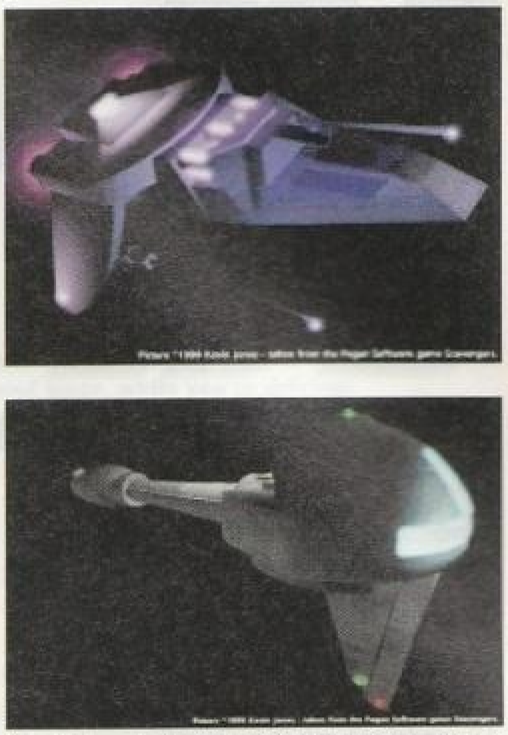
SCAVENGERS

Here's another PPC game that Pagan have got in development. It's not clear whether the screen shots are from cut-scenes or the game proper, but a graphics card-equipped PPC is more than capable of generating these kind of graphics, and seeing as the game is touted as "a complete real-time 3D game", let's just keep our fingers crossed shall we? The game will be combat-based, rather than strategic, and you'll be able to get into scraps in space, and on terra firma. There's a fairly good plot-line for the game that has distinct overtones of the second *Aliens* film.

For such an inhospitable, hostile place, space can look so pretty sometimes. Aaaah.

There are some interesting characters in the plot, and it would be good if they could be developed in the game. If you'd like to know more about *Scavengers*, or Pagan Software in general, you could visit their website at http://www.pagan-games.com.

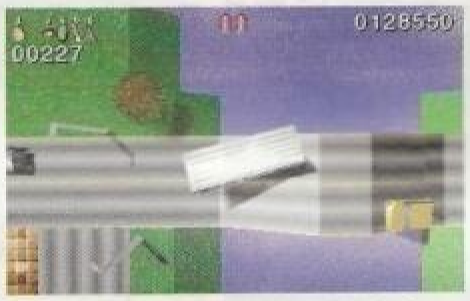
All three games previewed are due for release sometime in the first quarter of 2000 but Pagan say that *Dafel: Bloodline* should be the first one off the presses – so make sure you save some of that Christmas money.



Don't they look splendid? Let's hope that you'll be able to actually fly them soon.

Payback

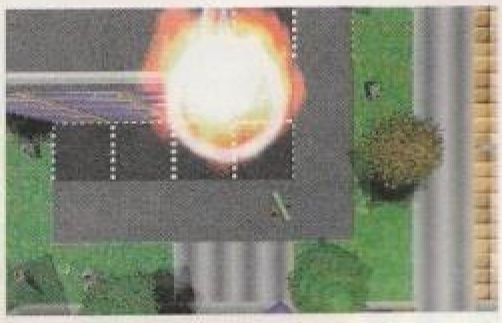
Apex Design have been responsible for creating some great Public Domain titles in the past including *Frontal Assault* and *6-Tris*, which have both featured in *Amiga Format*. Now they are planning their first commercial release with *Payback*. The game looks very much like *Grand Theft Auto*, which began life on the Amiga before DMA Design decided to release it on the PlayStation and PC. *Payback* will hopefully go some way to redressing that injustice, featuring four different cities, loads of different vehicles including cars, trucks, tanks, boats, buses and more. As with Dafel, a 3D sound technique is promised that simulates the doppler effect and sounds that fade as they get further away. While these screen shots don't represent cutting edge graphics, it should be remembered that GTA's success was down to gameplay (and reputation) rather than graphics. Besides, if the game sells well and Apex can get their hands on a PPC and graphics card, they'll support those systems, so graphically enhanced versions should become available. A Christmas release is scheduled and I'm looking forward to receiving a copy as soon as possible. If you're after more detail check out Apex's website at http://www.apex-designs.net.



A hump backed bridge? In a bus? Surely not.

Payback features four different cities and loads of different vehicles including cars, trucks, tanks, boats, buses and more

Paul Cavanagh

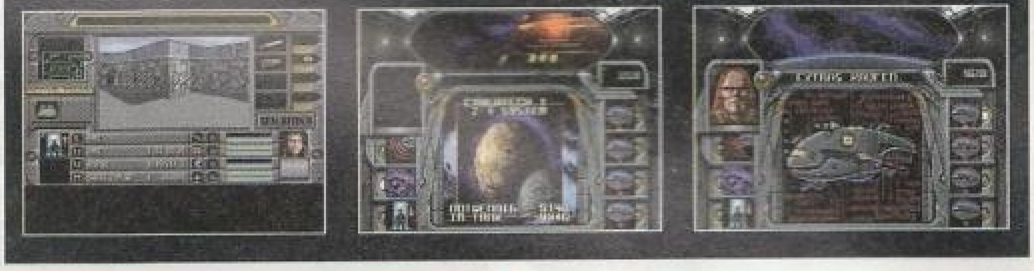


You've got a bazooka, so what you gonna do with it? Blow up buildings, naturally.

WHALE'S VOYAGE 2

By the time that you read this *Whale's Voyage* should have been out for some weeks, and you'll certainly have seen the adverts, so there's little point in me going into too much detail. Alive Mediasoft have put a copy in the post for us, but it's not got here yet, so expect a full review in our next issue.

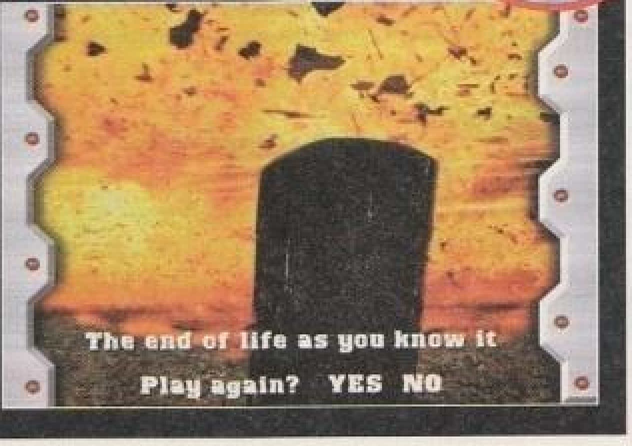
I wonder how much their electricity bill is?



EUROBURN

On the -ScreenPlay-/Commercial CD

Current Amiga game champions clickBOOM are working on a new project called *Euroburn*. You'll find a teaser trailer on the CD, but don't expect to learn too much about the game. It's a sequel to *AF Gold* winner *Napalm*, and will be sold as a standalone package, rather than an update. Go to http://www.clickboom.com/euroburn for the latest info, although they're not giving much away, and check out our CD pages for more piccies.



You learn next to nothing from the trailer, but who cares? It looks incredible. Oooh, I'm so excited.

Virtual GP

Get in a high speed, tyre-burning, flat-spinning race with VGP

On the
-ScreenPlay-/Commercial
CD

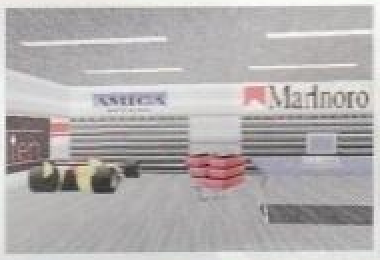
Paolo Cattani's *Virtual GP* (VGP) has been a long time coming, and I'm sure many of you have eagerly been awaiting its arrival. And since pretty much everyone knows how much I like *F1*, it's probably no surprise that I was asked to help with *VGP*, or that *AF* would ask me to review it.

VGP is a simulation based on the 1998 F1 season, featuring authentic renditions of the 16 circuits that were used that year, and all 11 championship teams (including the 22 drivers) including life-like representations of the car liveries. However, it's not an officially FIA licensed game, which is understandable (would have cost big bucks). This means that the drivers and teams have craftily been renamed, but it doesn't take a genius to work out who they are, and you can change them if you wish. The same applies to the sponsor names on the billboards and cars, but you only really notice if you look closely, which you don't have time to do when you're playing, unless you like crashing into walls. Certainly, the imaginary names don't really detract from the simulation.

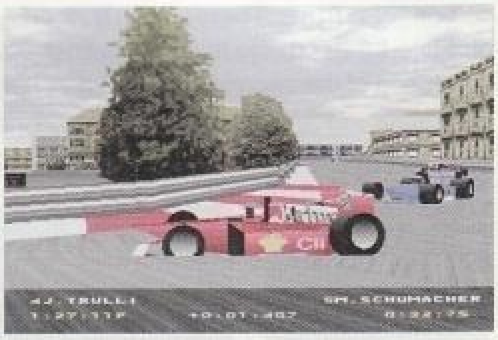
You're automatically given a Ferrari to drive which is not surprising as the author is Italian but you can change this if you want

VIRTUAL GP MAILING LIST

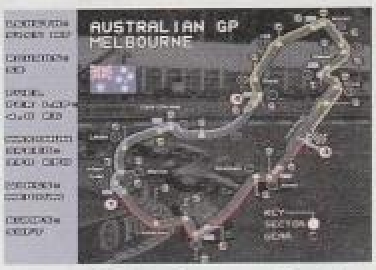
A group of *VGP* fans have already assembled on a mailing list dedicated to discussion of all aspects of *VGP*. To join the list, either go to http://www.egroups.com/group/virtualgp/ or send a blank e-mail to virtualgp-subscribe@egroups.com



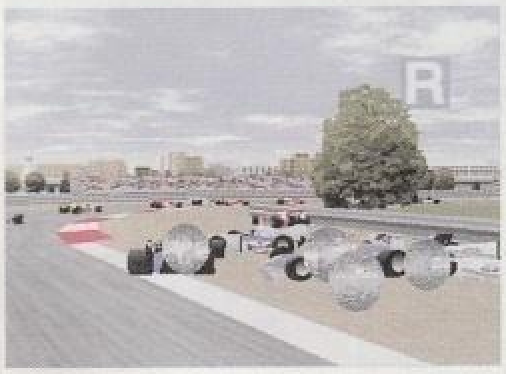
(Left) Your home in the VGP world – the VirtualPits.



The all familiar F1 timing caption.



Fancy a leisurely drive around Albert Park?



A GP wouldn't be a GP without crashes, and VGP is no different.

START YOUR ENGINES

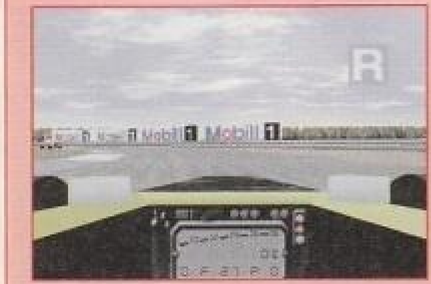
Upon loading the game, you are greeted by a rather nice 3D rendered intro, not dissimilar to the kind found in F1 racers on the PlayStation. One glaring inaccuracy is the 3D car model – it's not what I would describe as a modern F1 car. However, best not worry too much about that, as it's the game itself that counts. Starting a new game, you're given the option of racing in either a full 16 race championship season or a single race on the circuit of your choice. Each race weekend consists of a free practice session, a qualifying session (limited to 12 laps, as in real life), a race warm-up session and the race itself. Before each session you're presented with a detailed overhead map of the circuit, which includes the names of all the corners and the recommended gear that you should use at various positions. It also shows basic statistics, like the circuit length, number of race laps, fuel used per lap, maximum speed and car setup pointers. It is accompanied by an introduction and some tips, spoken in true (Martin) Brundlesque style, which is a nice touch.

The rest of the game revolves around your "VirtualPits", where you can adjust the game options, the car setup and, of course, you can get in the car to start driving. By default, you have to drive a Ferrari, which is not surprising with the author being Italian. However, you can change this by editing a configuration files using a text editor. The car defaults to mouse control, but you can also use a normal (digital) joystick or some kind of analogue device (joystick, steering wheel, etc). I found it best to begin with a digital joystick, although using a mouse or analog device allows far more control over the car. Additionally, there are various settings which allow you to customise how much control you have over the car.

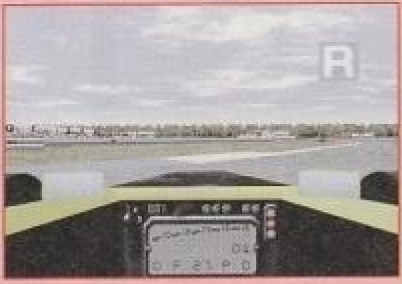
Tight corners can be very hazardous.

NERVOUS?

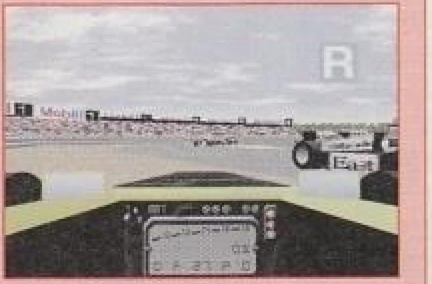
It's hard to describe exactly what it's like to drive a real F1 car, and the same is true with *VGP*. The handling of a modern F1 car is inherently very nervous. As an example, at low speeds F1 cars have to rely more on mechanical grip instead of the downforce which is generated at high speeds. Therefore, it is easy for the rear of the car to "step out", if you put down too much power too soon, especially when exiting a slow corner. With practice it is possible to correct slides by applying opposite lock before you lose control. *VGP*'s physics model allows this to be mimicked beautifully.



Once you feel the rear end stepping out, apply opposite lock...



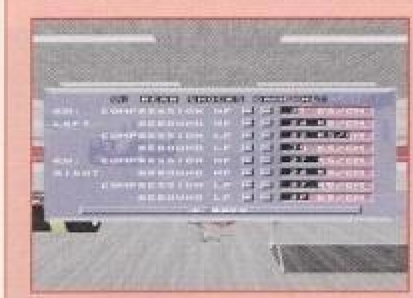
otherwise the pendulum effect will take over...

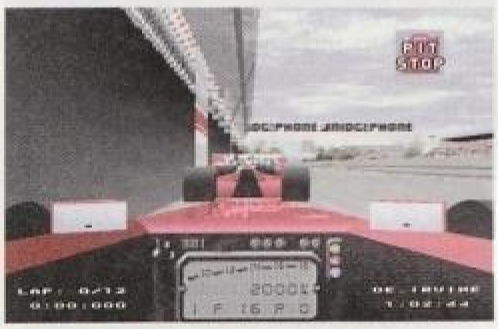


and you'll just have to hope you don't hit anything too hard!

SETTING UP THE CAR

Virtual GP offers lots of car setup parameters which affect the way the car handles, feels and performs. These include the basic variables like tyre compound, front/rear wing settings, gear ratios and fuel load. These are just the tip of the iceberg, because you also have control of many chassis settings, including wheel camber, suspension, anti-roll bars and brake balance. The suspension settings almost require a whole separate review. Briefly, in addition to altering the spring rates for the front and rear wheels, there are four separate parameters for shock/damper adjustment, per wheel! As far as I'm concerned, this is a good thing, but it may not interest everybody. Most importantly, the car setup parameters are actually part of the physics model, so your car will react to changes in the same way as a real F1 car would, unlike some console F1 games that I could mention. Needless to say, the number of setup permutations adds a lot of depth to the game.


Rear shock absorber settings.



Your team will tell you when you need to pit for new tyres and/or fuel.

HANDLING

Generally speaking, the "physics model" implemented in a F1 game influences how accurately the simulation of a real F1 car is conveyed. Put simply, the physics model affects the way your car reacts to your input (the joystick) and to its surroundings (the track, obstacles, other cars, etc). In many existing F1 games, the physics model is over simplified, resulting in cars that do not handle in exactly the same way as real F1 cars. *VGP* is not one of those – its physics model and car dynamics are actually very realistic. Fascinatingly, *VGP* considers each wheel independently in all calculations, which helps ensure that the car reacts in an authentic manner.

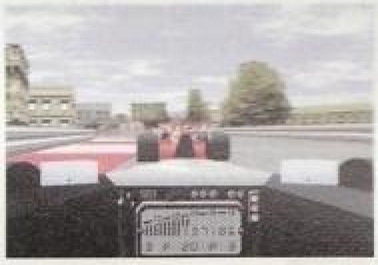
Chances are you will be unable to stay on track for a single lap when you first play *VGP*, but help is at hand. A number of help options allow the computer to take on some of your work including automatic gears, invincible cars, fake downforce and best line help. A real F1 driver learns to understand which adjustments the car requires in order for him to get the best out of it. This is where the car setup comes in (see boxout), but you may wonder how on earth you work out how to set the car up for your driving style. Fortunately, *VGP* provides a sophisticated telemetry system to assist you. Over the duration of a lap, it will record your speed, rpm, g-force, tyre wear, amount of skidding, brake and accelerator reactions. All of which can be viewed as graphs back in the pits, which can be analysed in order to make your car setup better.

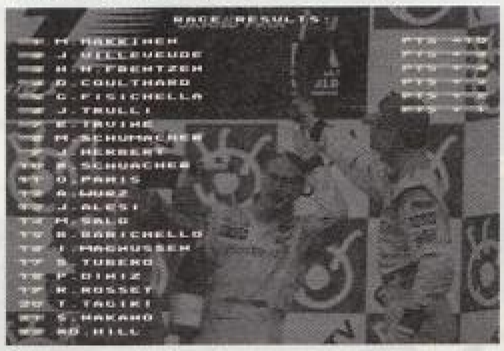
ATMOSPHERE

Graphically, *VGP* sets a relatively high standard using a texture-mapped 3D engine – a marked improvement on previous Amiga games of this type, even though it only uses a 64 colour display. The graphics are not up to the standard of console F1 games – it would be unrealistic to expect that and frankly it doesn't matter as the atmosphere generated due to the emphasis on realism is more important. If I have one gripe, it is the rather cartoony looking cars. This style doesn't really fit with the rest of the game. It's may be an attempt to introduce a fun element into, what is, a serious simulation, but I'd rather the cars looked more realistic. Have no fear though – Paolo has promised to release some more detailed looking car objects.

Sound- wise, simply envisage the wailing engines, screeching tyres, booming crashes, and throw in lots of speech for extra effect. The in-game speech (essentially a pits-to-car radio), allows your team to contact you if they need to. Sadly, the information can be quite vague at times.

The manual comprises of a single text file on the CD, some of which is repeated on the CD inlay. It's quite brief and to the point and more content and insight into car setup would not have gone amiss. Having said that, the manual does cover most aspects of the game, and it's definitely worth reading.


Cockpit view of the streets of Monaco.

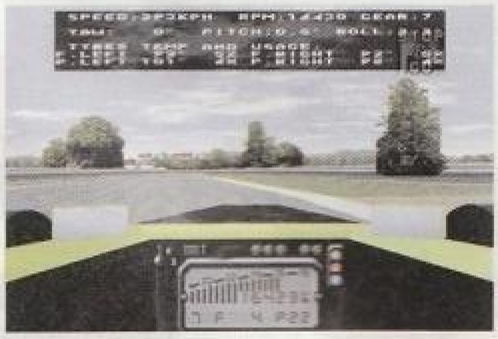

RACE RESULTS

M. HAKKINEN
J. VILLENEUVE
H.H. FRENTZEN
D. COULTHARD
G. FISICHELLA
J. TRULLI
E. IRVINE
M. SCHUMACHER
J. HERBERT
R. SCHUMACHER
O. PANIS
A. WURZ
J. ALESI
M. SALO
R. BARRICHELLO
J. MAGNUSSEN
S. TUERO
P. DINIZ
R. ROSSET
T. TAKAGI
S. NAKANO
D. HILL

Winning is difficult to achieve without a lot of practice.

TECH SPECS

***VGP* is relatively system friendly – you can even set it up not to disable multitasking. At minimum it requires an 030, a CD-ROM drive and 4MB of fast RAM. Such a system is able to run *VGP* smoothly at Low Res (320x256). With a faster machine (040/060), you'll be able to take advantage of the High Res version (320x512). To see the animation sequences, you will need a 16x speed CD-ROM drive, or you could copy the whole CD to your hard disk if you have a spare 520MB. The animations are stored in HAM8 format, so you'll need AGA to see it (ie, a A1200 or A4000). The game itself was designed to get the best out of the AGA chipset, but it will also run on a graphics card, thankfully. You may need to use third party mode promotion software (for example, ModePro) to force *VGP* to use your graphics card.**



You can even monitor tyre temperature and wear, while you're driving!

THE FINAL LAP

I would be lying if I said that *VGP* was perfect. It's obvious that a lot of effort has been put on implementing a realistic physics model, but at the expense of the quality of other areas of the game. Perhaps the most important being the front-end – while the menu system does its job, it can be very annoying to navigate and it's not very intuitive. More specifically, it's hard to tell whether certain options are enabled or not. And then there's the young Essex lady's voice that somewhat pointlessly informs you which menu you're looking at when a decent tune in the background would have sufficed. Furthermore, there's no wet weather simulation, the speeds are measured in km/h (no mph option) and there is some dodgy pronunciation. These minor oversights do take the shine off what is otherwise a good product.

VGP should certainly not be viewed as MicroProse *F1 Grand Prix* with better graphics – *VGP* offers a pleasantly different driving experience to any die-hard F1GP player. Admittedly, *VGP* will not appeal to everyone – a certain level of patience is required while you learn how to get the best out of the car but keep practising and you'll soon experience the immense satisfaction of mastering an F1 car. A must buy for dedicated F1 simulation fans.

Oliver Roberts

SUPPLIED BY: Epic Marketing (08700 110013)
PRICE: £20.00
REQUIREMENTS: 030, 4Mb fast ram, CD-ROM drive, AGA and/or graphics card.

Pros and Cons

- + Realistic car simulation
- + Accurate representation of the 1998 season
- + Potentially very addictive
- − Documentation needs improvement

OVERALL VERDICT:
A first-class F1 simulation. Well worth £20.

84%

GAMEBUSTERS!

In our review a few issues back, you may have noted what a tricky little swine Wasted Dreams can be at times. This should help…

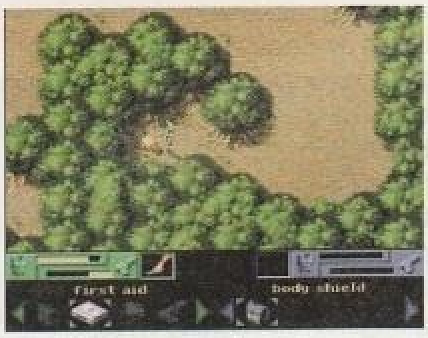
Wasted Dreams

PART 1

Complete Walkthrough

Let's start with a couple of general hints. Firstly, don't let your pride get the better of you. If you're outnumbered, or are taking a bit of a hammering from the bad guys, run away. You may be able to return and pick off your bad guys one by one, rather than taking hits from all sides. Once you know where the enemy is, you can look around to find the best place to fire from. If you find yourself running low on ammunition, avoid groups of aliens and pick off the ones who are on their own, and you may get lucky and be able to collect any ammo they might drop. Always conserve your ammunition – although you can use your fists, you won't last long doing so. Finally, while this solution has been played out on the single player game, it'll work just as well with the two player option. Right, that's that sorted then. Let's get on with the game.

> **You should now be by the cave. You could try and rescue the alien's friend now, but the priority is to find the shield recharge point**

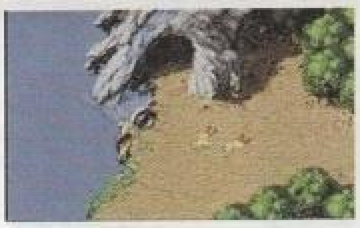


Helping this alien who is in a 'coma' starts off the quest.

COMBAT

You're not going to get very far without a gun, so pick it up from the spaceship, along with a couple of other bits and bobs. Go to your right and get your first taste of combat – there are three aliens here to dispatch. If you take loads of hits, you may as well just restart the game. In fact, it wouldn't be a bad idea to practice your shooting skills here, and keep restarting until you get pretty sharp – it's a long way before you'll be able to boost your shields, so there's little point in saving the game with badly depleted energy. Once you've had a bit of practice, get rid of the aliens (examine a dead one if you like) and carry on to the right until you find an injured alien. Use the first aid kit on this alien. Eventually he'll give you a laser cutter and ask you to help his friend who was last seen in a cave.

Go back past the spaceship, and then up. Be careful, there are aliens about up here. Follow the river up and right and dispatch two more green 'gorkies'. You should now be by the cave. You could try and rescue the alien's friend now, but the priority is to find the shield recharge point as soon as possible. It's a bit of a long slog, but we'll get there in the end.



Don't forget to pick up a pickaxe!

Wasted Dreams

Pick up the pickaxe to the right of the cave's entrance before going down and right. Keep heading right until you reach an area where there's a man fixing a spaceship. Talk to him and exchange your navigation device for a supply card. Return to the river. Find the dip in the river bank and press the fire button to start swimming. When you reach the other side, go up, shooting aliens on the way, to reach a mining area. Be careful, the area where the men are working is protected by a forcefield that you should

Simon the Sorcerer

K. Tropman has got a couple of questions about this excellent adventure game:

Moose head
Walk to
Look at
Open
Move
Consume
Pick up
Close
Use
Talk to
Remove
Wear
Give

Q I can't find the staff that the wizards want me to own before they'll teach me magic.

A ***If you flatter the wizards enough before saying that you'd like to be a wizard yourself, they should give you a staff. Mind you, you have to get a mummy's bandage to use with it before it becomes much use to you.***

Q How do I defeat the witch to get her broomstick.

A ***First of all you need to help out the talking tree. Purchase some white spirit from the shopkeeper, and use it on the pink mark on the talking tree. The tree will teach you some magic words. Go to the witch's house, take the broom and you'll start the challenge with her. When she turns into a dragon, turn yourself into a mouse and escape through the mousehole.***

Just don't try getting the brooms to clean up for you.

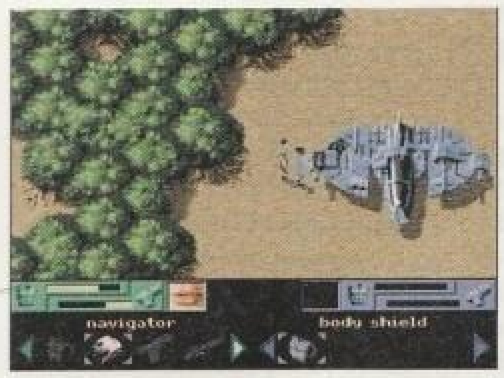
Elvira 2

The Jaws of Cerberus

Miss D. Hunt from Kent has a few questions about this spooky game.

Q How do I get past the vampire in the house?

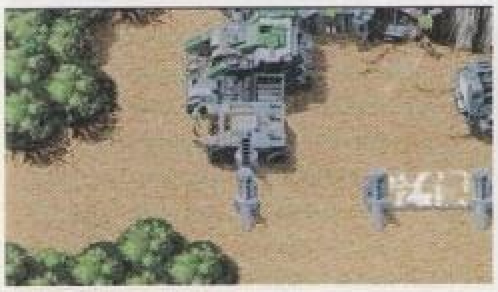
A *You need to open the skylight. You'd think it'd be simple, wouldn't you? But no, you need to smash it using a tuning fork. You'll find the fork under the pillow in the room where the Succubus is. If you're stuck on how to get past her, just use a courage spell before you enter the room. If you use the tuning fork as soon as you get to the top of the attic stairs, you shouldn't have any more problems from the vampire.*



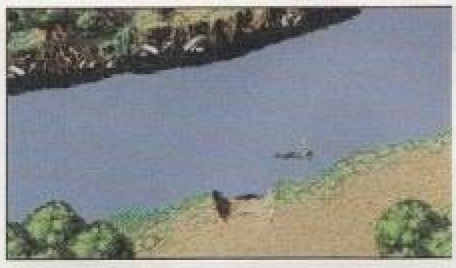
not attempt to cross at this point. You should go to the left of this area and pick up some red minerals.

IDENTIFY YOURSELF

Go left to find two men working on large machines. You can speak to the man on the left if you like. Use your red minerals on the hole in the large machine. It will explode, and you'll have to defend yourself against the two men who will attack you. Go back to the mining area, right, and shoot the three aliens who are attacking the area where the forcefield was. Go through the middle entrance and speak to both the men in this area. One will give you a book and an ID card. Go back to where you blew up the machine and try the ID card in the door at the top of the screen. It won't work, so go back to the mining area and talk to one of the men again. He'll now give you a door card which you can use. The energy recharge unit is on the top right of this room. Go straight up to it and use it. You can use this recharge point as many times as you like so from now on come back here every time that your shields get low.



(Left) Be very careful around these forcefields. They hurt.



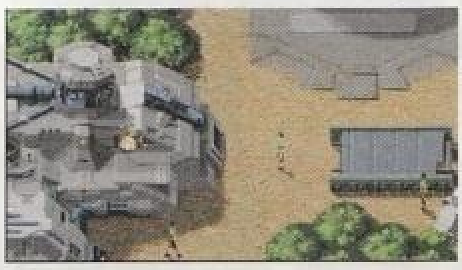
(Left) This technician isn't very friendly, and he's a rotten liar to boot.

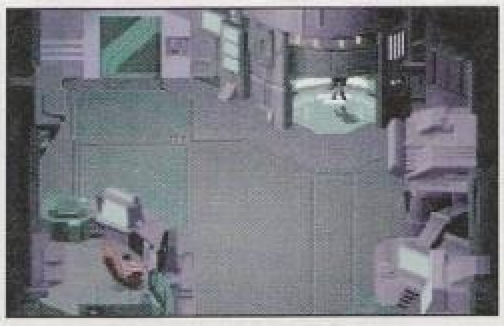
Now we can set about rescuing that alien's friend. Go back to the river, swim back over and enter the cave. Be warned, there are loads of aliens in this cave – but you can recharge your shields now, can't you? Take the second path on the left and follow it to the end. Use the laser cutter on the power source. Go back up the passageway, go down and then left. Shoot the guard and proceed to the end of the passageway where you will find a good alien, Harrawie.

You will need to use your laser cutter on the power source in this room to release him. Talk to Harrawie and then follow him. A battle will ensue. Afterwards, Harrawie will make a bridge before teleporting. When he disappears pick up the metal stick that he drops. Cross over the bridge and examine the bushes on the other side, and then shoot them to reveal a door. Use Harrawie's stick on the door to open it. Enter this room and pick up an empty can and a box. Return to the river and fill the can up at the riverbank. Go back into the cave and take the top path on the left. Watch out for the mines, keep going left until you reach the fire. Use the can of water on the fire, proceed left and get rid of the aliens. In the room you come to you will find some gunpowder which you can put into your empty box. If you now pick up the detonator you can make a bomb.

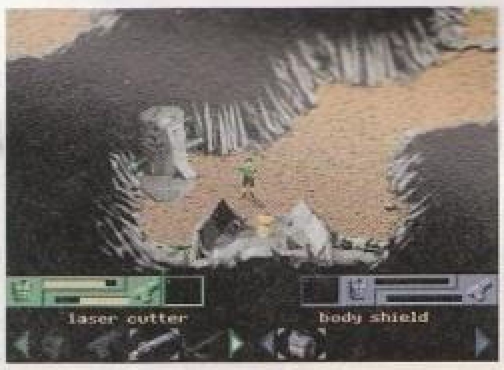
Swim back across the river and head back to the shield generator, and use it if necessary. Use the computer terminal on the bottom left, and then examine the top door. Speak to the man sitting on the desk and show him the ID card when he asks for it. You will now be able to go through the top door and enter the military complex. We'll explore what goes on inside the complex next issue.

Paul Cavanagh

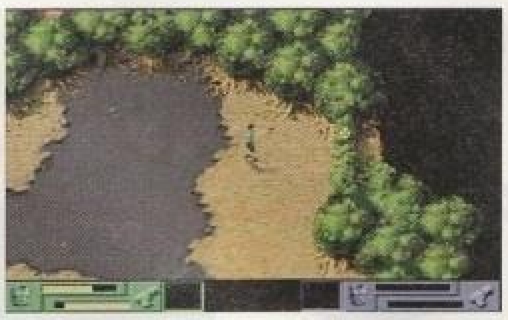


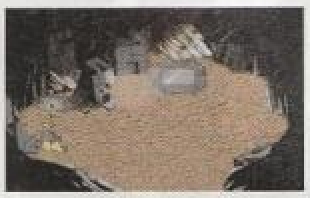


(Above) What a laugh! You get to blow up this big machine. (Right) What a relief! An energy recharger.



(Right) Poor Harrawie, being tortured like that.





(Above) You have to shoot these bushes before you can open the door behind them.

Q How do I get the key out of the fish tank without losing an arm? If it's the telekinesis spell, where do I get the magnet from?

A *As it happens, no, you don't use that spell, but the magnet is in the boom box in the typing pool. What you need to do is poison the fish in the tank. You'll find a poison recipe stuck in between the pages of a book in the library. You will need the mad scientist to help you mix up the potion. He'll only help you if you disguise yourself to look like his assistant. To do this you need a picture of his assistant that you can find in the script that the corpse in the lavender room has. When you've got the potion, use it on the shank of meat that is in the meat locker.*

Q How do you get past the wizard in the caves?

A *You'll want to look like a wizard, and he might help you. Again, use a photo in the dead writer's script. If you can't work out how to get hold of the script, fire ice darts at the corpse's wight. When you've seen the photographs you can complete your disguise in the make-up room and the costume room. With the wizard, you have to tell him that you've had food poisoning.*

SEND US YOUR TIPS & QUERIES!

Helping Hands

Have you got hints, cheats, tips or general good advice for any Amiga games? We'd especially like some for the newer ones on the market. Or, if you've got a query about a game, give us a brief explanation of it, where you're stuck, then drop us a line and we might be able to answer it in Helping Hands. Please don't send us SAEs though as we'll just steal the stamps.

Name of Game(s): ....

Point where I'm stuck: ....

....

....

....

Send all tips and questions to:

HELPING HANDS • Amiga Format • 30 Monmouth Street • Bath • BA1 2BW

A quick delve into the postbag reveals more of your interesting and varied

On the CD
-ReaderStuff-/-ReaderGames-

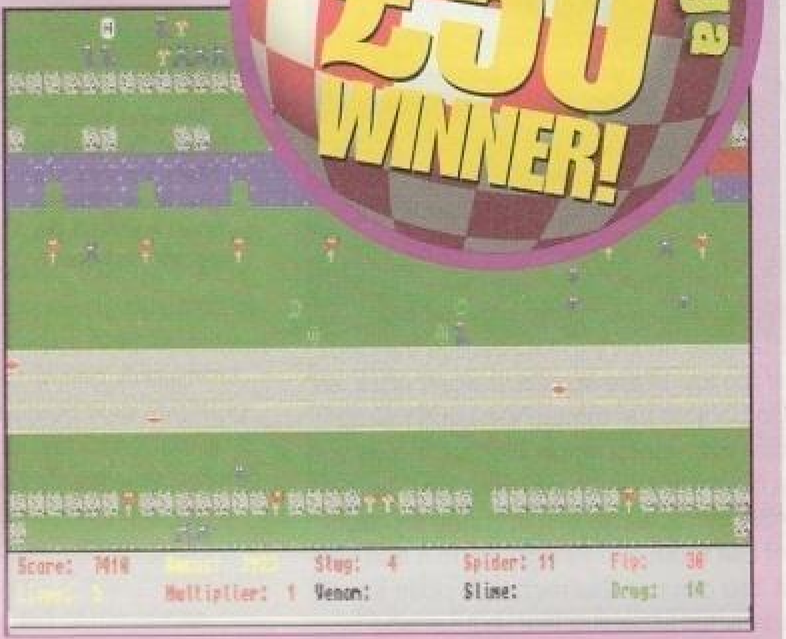
Reader Games

Your games continue to surprise me with their variety and innovation. It seems to me that every issue there's a great mixture of games from various genres. I love the feeling of not knowing what's in that jiffy bag – there are never any screenshots, and rarely a description of the game, so it's like Christmas every month. It's encouraging to see so many of you being creative. Keep them coming!

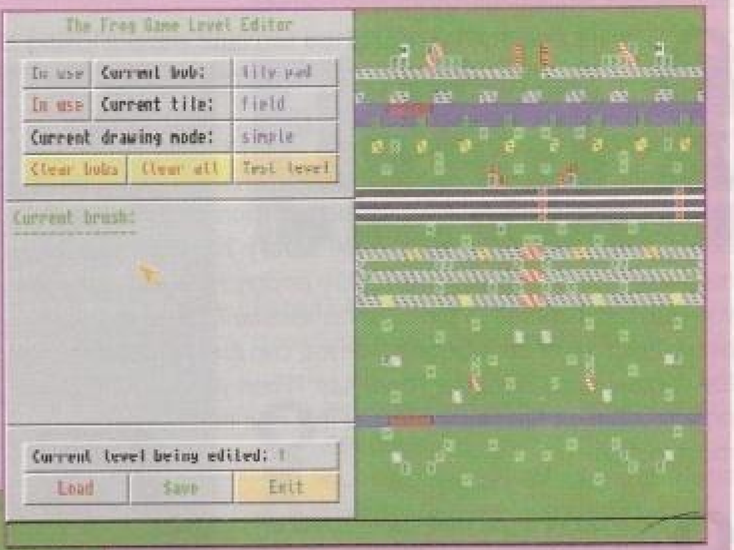
Sponsored by Amiga £50 WINNER!

Newfrog

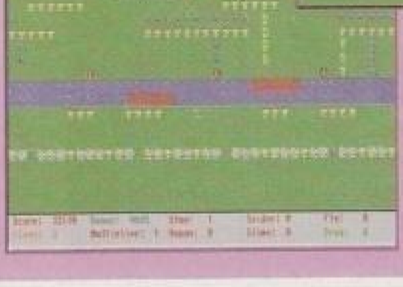
Rik Roots has obviously worked hard on this game, which is challenging and interesting. It differs from the classic frogger game in respect of the fact that the frog has food to eat in the form of slugs, spiders and flies. The more food you eat, the more points you get. There is also a bonus system that depends on how many creepy-crawlies your frog gobbles up. You start with a bonus that decreases each time you move, but if you eat a certain amount of food the bonus multiplies. This is a fairly novel idea, and can add a certain amount of strategy to the gameplay as in order to make points you need to eat as many snacks as possible while keeping your movement to a minimum. In other respects it's very similar to standard frogger games with floating logs on rivers and cars on roads to avoid. You couldn't really have a frogger game without them, and I like the way that it can be a real challenge to cross the rivers in this version, where timing is vital, and there are only a few opportunities to get it right. There's an easy to use level editor included so that if you finish all the levels, you can make your own. Bonus. Another thing that I liked is the fact that Rik is obviously positive about his programming. He states in the readme file that he's working on a new version and lists the improvements he hopes to implement. I normally use this space to suggest how a game may be developed, but it's obvious that Rik has already thought about it, so I'll be quiet. I was also very impressed that he was fast to send me a new version of the game which included a previously missing library file. Good stuff Rik, keep it up.



I really am getting worried about my fondness for all things froggy. First Superfrog, and now this. Twitch. Gribbet.



Here's the simple to use level editor. It might look complicated, but it really isn't.



AUTHOR: Rik Roots
LANGUAGE: AMOS Pro
VERDICT: An interesting variant of the classic game that is fairly addictive and pretty good fun.

READER WARRANT

When you're sending in your submissions make sure you also give us:

1. An address where you can be contacted.
2. Details of the language used to create the game.
3. A recent photo of yourself.

The address to send your stuff into is:
READER GAMES • AMIGA FORMAT • 30 MONMOUTH STREET • BATH • BA1 2BW

Everything included on the *AFCD* must have a reader warrant with it. Just cut it out of this page or photocopy it, sign it and send it in to us with your game and a photograph of yourself. A last reminder: if you don't include this warrant we simply won't be able to put your game on the CD – that means you won't be able to have it judged by other readers.

In respect of all material which forms my reader contribution to Future Publishing's *Amiga Format*, I hereby warrant that:-

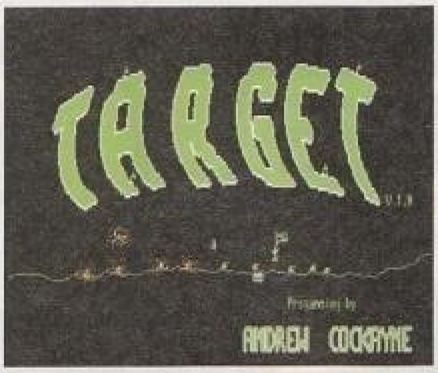
1. The material is original and does not infringe any other material or rights;
2. The material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;
3. That there are no legal claims against the material provided;
4. That I have full power and authority to provide this material to Future Publishing.

Signature: ______________________________

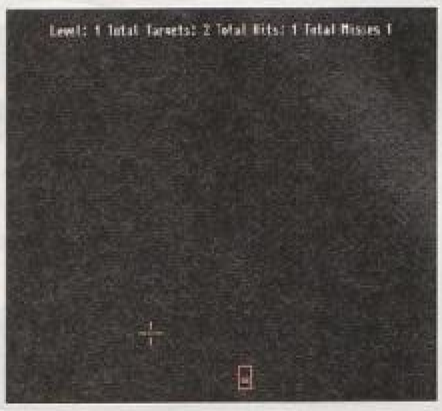
Target

This is the first game that Andrew Cockayne has completed and it's incredibly simple. But it's a good example of where you should start out in programming. Everyone has to start somewhere and Andrew has mastered collision detection, setting up mouse control, some basic graphics and some great sound samples. All you have to do is to hit targets with the mouse cursor. If you miss 50 targets, the game is over and if you hit 200 you have won. It's that simple. When I first played it I thought it was completely impossible, and then I remembered to take the accelerator card out of the Amiga! Then I found that there was very little challenge in the game but, as I say, it's a good example of where you can start from in programming. I really enjoyed the sound samples Andrew, it shows your sense of humour, and I liked the idea that America are the aggressors. Keep programming, and send in anything else that you come up with.

If you'd like some ideas on how this particular game could be improved, my suggestions would include changing the icons that you have to shoot each time you progress a level. Or how about developing a lives system, where the targets shoot you if they are left on the screen for too long? Also, it's not very clear how you score points in this game, so how about having an icon that pops up only occasionally that is worth bonus points? It would be great if you could develop the game so that the icons moved about on the screen after they've appeared. Just a few ideas. Most of all, though, enjoy the process! Oh, and don't worry too much about your spelling, I'm pretty sure that my spelling was awful when I was 14 too.



Target – simple name, simple game.

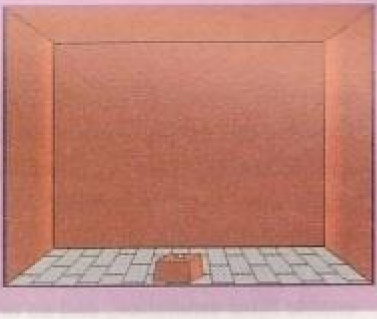


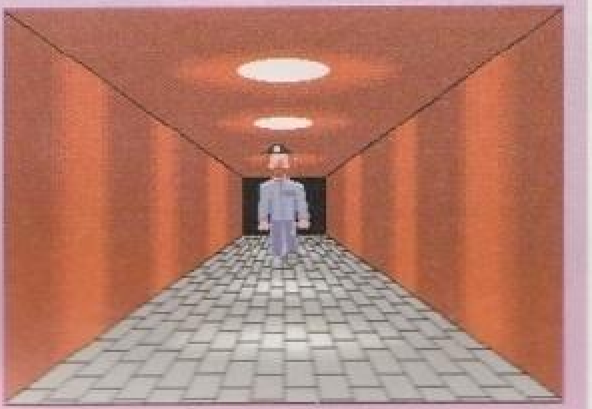
Quick! Move that cursor down and zap that icon thing.

AUTHOR: Andrew Cockayne
LANGUAGE: Amos Pro
VERDICT: A good example of a simple game which makes a great introduction to some of the key principles in games programming.

Tunnel Runner

Stephen Hailey has provided us with this fun maze game. I really like the story, the idea that Tunnel Runners are these highly respected professionals, and hence the player is desperate to become one. The idea of the game is presented to you by a mentor called Delissia, who briefs you on the levels that you are about to enter. The user interface is really quite professional looking with options to redefine the controls, turn the music off, enter passwords, etc. The menus can be navigated either with the mouse or keyboard, which I think is a nice touch. The game itself can be pretty confusing, with the mazes looking very samey, but I think that's the point. The bad guys are pretty stupid and are easy to defeat as long as you're quick, although, this is also acknowledged in the documentation. If Stephen wanted to develop the game he could add different wall textures and bad guys, and make it so that the enemies needed more than one shot in order to be killed. As it stands this is a nice little game that runs well, and I hope that Stephen does do a bit more work on it, because it's got plenty of scope.



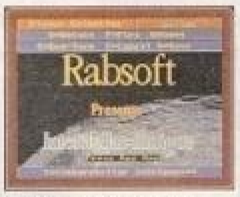


A fearsome warrior approaches. Okay, he's a bit pathetic, but given a chance he'll chin you.

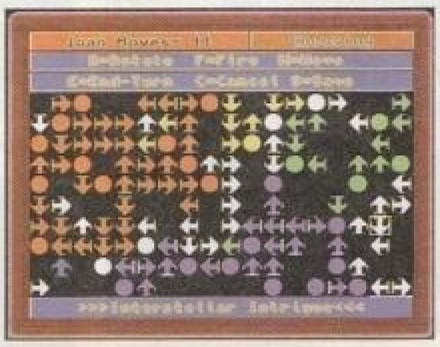
AUTHOR: Stephen Hailey
LANGUAGE: Not stated, although it looks very much like AMOS.
VERDICT: A simple but fun game with a professional looking user interface.

Interstellar Intrigue

This is an interesting multiplayer strategy game. The objective is to be the only player who has fleets and planets remaining. At the beginning of a game, each player has a one planet of their colour, and must attempt to capture neutral fleets (these are white, but turn to a player's colour when captured). When a player has some fleets and planets of their own, they can concentrate on capturing or destroying other players' fleets. The game is turn based and each player gets one turn for each planet that is in their control. The game can only be played using the keyboard, and the options open to a player during a turn are to move, fire a weapon, rotate and end a turn. Planets and fleets are captured by having your fleet pointing to the rear or side of your opponent's. If you have two fleets pointing directly at each other, there will be no change, and a fleet can be changed to neutral if there is an equal number of fleets from different sides pointing at it. This all sounds very confusing at first, but you'll get the hang of it when you play the game. It's quite a challenging game, and can become quite involved, especially if you play with more than two players. The game is very simple in terms of graphics and sound, but it can be quite compelling. Get a couple of mates over and give it a bash.



Rab? Soft? Well I wouldn't want to be the one to tell Mr Nesbitt that.



With four players, one simple move can start off a whole chain reaction.

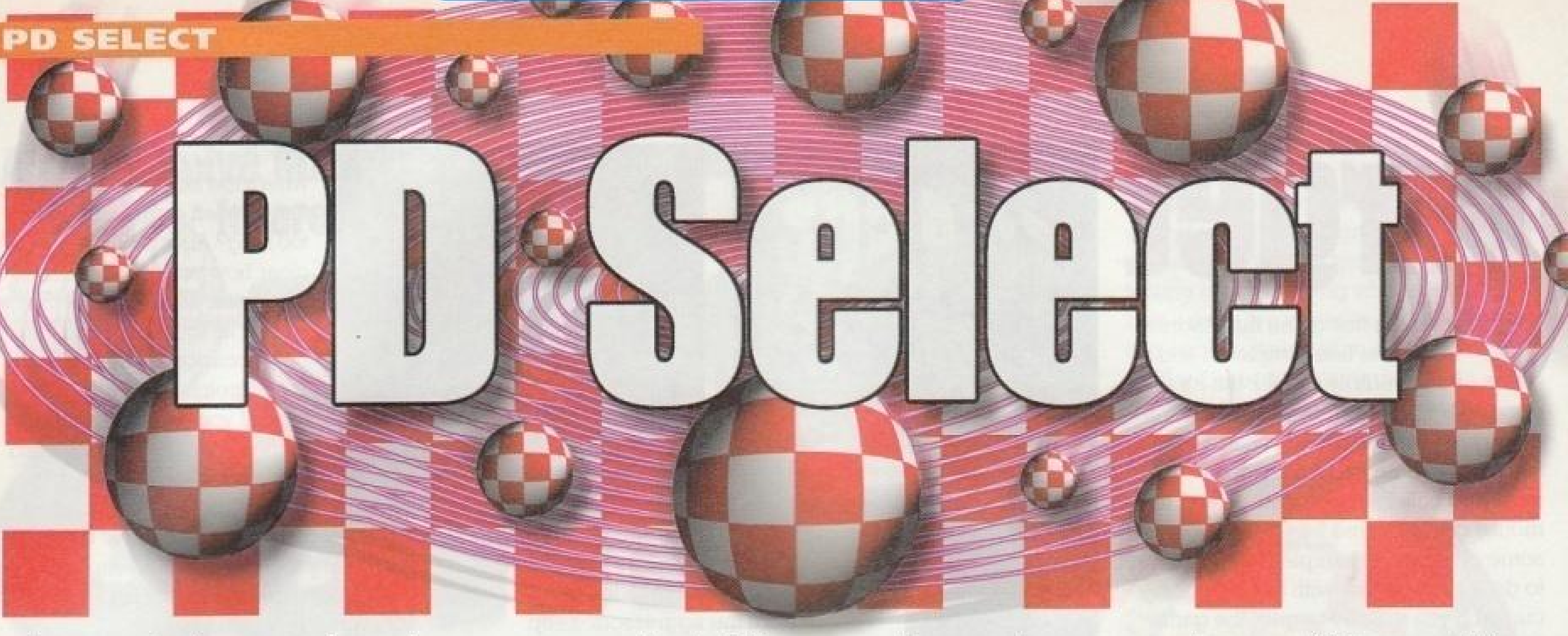
Paul Cavanagh

AUTHOR: Roger Buckley
LANGUAGE: AMOS
VERDICT: A game that demands some thought. Challenging if you are playing against the right people.

SEND US YOUR READER GAMES

These pages are for you! It's a great place to show other Amiga owners what you're capable of, and if we really like what you send us, we'll send you the lovely sum of £50. Nice! So send your reader games to:

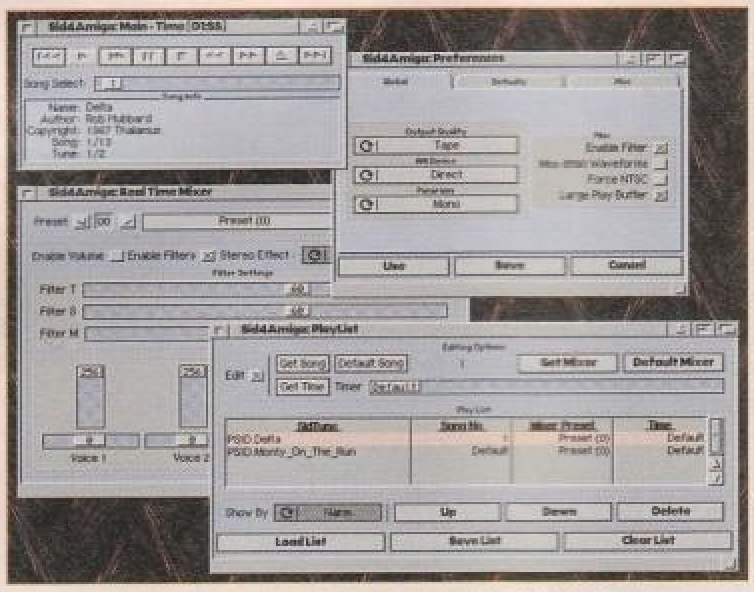
Reader Games, Amiga Format, 30 Monmouth Street, Bath BA1 2BW.



PD Select

Since Christmas has been cancelled this year the only presents you'll be getting are those that can be found in the Public Domain so read on

Sid4Amiga 3.16r2


Sid4Amiga: Main - Time [01:55]
Song Select:
Name: Delta
Author: Rob Hubbard
Copyright: 1987 Thalamus
Song: 1/13
Tune: 1/2
Sid4Amiga: Preferences
Tape
Direct
Mono
Enable Filter
Force NTSC
Large Play Buffer
Use
Save
Cancel
Sid4Amiga: Real Time Mixer
Preset
Preset (0)
Enable Volume
Enable Filters
Stereo Effect
Filter Settings
Filter T
Filter B
Filter M
Voice 1
Voice 2
Sid4Amiga: PlayList
Editing Options
Edit
Get Song
Default Song
Get Mixer
Default Mixer
Get Time
Timer
Play List
SidTune
Song No.
Mixer Preset
Time
PSID.Delta
PSID.Monty_On_The_Run
Default
Preset (0)
Show By
Name
Up
Down
Delete
Load List
Save List
Clear List

The nostalgia of 8-bit sound synthesis with Sid4Amiga.

One of the things that put the Commodore 64 head and shoulders above its 8-bit competitors was its fantastic sound synthesis. While the Spectrum could only make feeble beeps, the C64's SID (Sound Interface Device) featured three voices with configurable waveforms, envelopes and filters. Creating music with the SID was an art form. Composers such as Rob Hubbard and Martin Galway achieved legendary status writing soundtracks for games of the day, tracks that compared favourably with "real" music.

Today's nostalgia craze for anything 8-bit, means that you can listen to C64 music with an emulator. But it seems rather excessive to emulate the entire hardware of a C64, just to listen to some tunes. *Sid4Amiga* provides a more elegant solution.

At a simple level *Sid4Amiga* is a player for SID tracks, similar to the hordes of SoundTracker players available for the Amiga. However, SID tracks are not just musical data, they contain the programs that do the actual playing. Hence, *Sid4Amiga* emulates not just the SID chip, but a 6510 CPU and the CIA timer chips as well. This is necessary to reproduce anything close to the original sound, but it requires a lot of processor power to do so. Luckily, a PPC (WarpOS) version of the player is available.

***Sid4Amiga* has two main components, the player itself and a separate GUI. The player itself can only be called from a shell and can output tracks to AHI or to a WAV sample. The GUI, which requires MUI, provides a more comfortable environment for your listening pleasure. It has the usual CD-like controls for playing songs, easy configuring of preferences and the creation of songlists. The only annoying thing about the GUI is that it is not real-time, that is, the effects lag noticeably behind the causes when twiddling with the controls.**

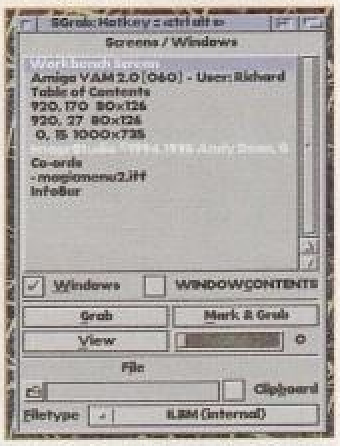
The most crucial aspect of a program like this is how good it sounds. Thankfully, the answer is damn impressive. My memory is not so good that I can remember exactly what these tracks sounded like on the original machine, but I'm sure *Sid4Amiga* comes fairly close. You have to play around with the settings to get the best quality: set the output quality to DAT (the highest), turn on stereo sound with surround panning, enable filter emulation, and so on. Of course, the higher fidelity the sound generation the more CPU power required. And a 16-bit soundcard and some beefy speakers are a definite must.

The package comes with some soundtracks for you to try out, but I felt the ultimate test would be one of my faves, the theme from *Firebird's Arcade Classics*, so I had a trawl of the web (have a look at http://homefreeuk.net/wazzaw/HVSC/). This Rob Hubbard number is a hard rock classic with a wonderfully dirty guitar sound. I wasn't disappointed. A tear almost came to my eye as I sat back listening to my Amiga belching out those gloriously fuzzy power chords.

I guess this is package for those that remember those halcyon 8-bit days. Everybody else will probably say, what is that awful noise? But, hey, that's their loss.

BY: **Paul Hearns**
WARE: **Freeware**
FROM AMINET: mus/play/Sid4Amiga.lha
SIZE: **361K**
REQUIRES: **MUI and AHI**

SGrab 1.11


SGrab: Hotkey = ctrl alt s
Screens / Windows
Workbench Screen
Amiga VAM 2.0 [060] - User: Richard
Table of Contents
920, 170 80x126
920, 37 80x126
0, 15 1000x735
Co-ords
-magicmenu2.iff
InfoBar
☑ Windows
☐ WINDOWCONTENTS
Grab
Mark & Grab
View
File
☐ Clipboard
Filetype
ILBM (internal)

How does that grab you? Snapshotting with SGrab.

Should you ever work on a computer magazine, you'll quickly realize that one essential tool is a screen grabber. I reached the conclusion very early in my career as an Amiga journalist that the best grabber for the Amiga was *SGrab*.

I take *SGrab* for granted so much that I was surprised by all the features in this latest version. I'm sure the old one that I was using previously didn't even have a GUI. But since I have never actually read the manual, I couldn't swear on it. I simply had it tied to a hotkey with MCP and it always worked well enough for me.

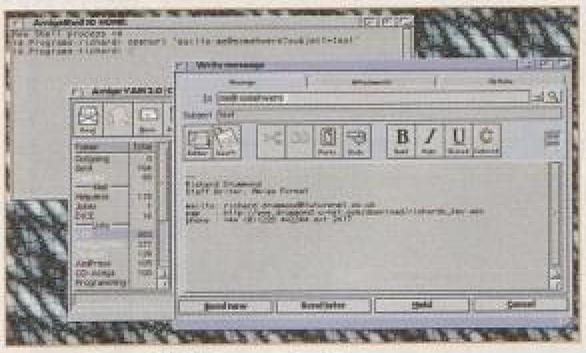
You see, the reason that *SGrab* gets used so much has nothing do with its interface. Its simply because it copes the best with all the varieties of different Amiga screenmodes. Native, CyberGraphX or Picasso96, single- or double-buffered – it matters not. If it's a proper OS screen, *SGrab* can snap it.

SGrab can function as a commodity. Hit the configured hotkey combination and up pops the GUI. This displays a list of all screens and windows currently open on your system. Simply click the screen or window you wish to snap, select the output file and click the grab button. The GUI itself will disappear during grabbing. You can elect to mark out an area of the chosen screen to grab. Images can be saved as an IFF, JPEG or any V45-supported writeable datatype format or can be pasted to the system clipboard. All these operations are accessible from the shell and the program also features an ARexx port.

SGrab is an accomplished piece of programming. My only criticism is that when grabbing windows it should first activate the selected window and bring it to the front of the screen.

BY: **Stephan Rupprecht**
WARE: **Giftware**
FROM AMINET: util/wb/Sgrab.lha
SIZE: **46K**

OpenURL 3.0



OpenURL and YAM in perfect harmony.

The Amiga has a huge array of different Internet software and, luckily, through the magic of ARexx these can be made to integrate with each other. But typically, each package needs to be configured differently and you may even have to write your own ARexx scripts to get them to talk to each other. *OpenURL* is a suite of programs to make life easier.

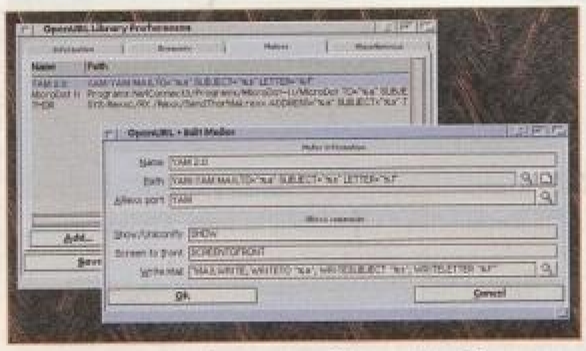
OpenURL allows you to select and configure default packages to launch when following different URL types. For example, I use *YAM* for email and *Voyager* for browsing, so when I click a mailto: link in *V*, I want it to send a message to *YAM* to open a new mail with the specified address. Conversely, if I'm reading a mail in *YAM* with an http: or ftp: link, when I double-click this link I want the corresponding site to opened in *Voyager*. This is no problem with *OpenURL*.

The *OpenURL* preferences editor allows you to select your preferred browser and mail applications. Support for all the main packages – such as *V*, *IBrowse*, *AWeb*, *Microdot* and *YAM* – is provided and can used straight from the box. For any other software you just have to tell it how to find the executable, the name of its ARexx port and how to send the commands.

Next you have to set up the Internet packages themselves, that is, if they do not already directly support the openurl.library. It is just a question of telling them to run the *OpenURL* shell command with the necessary arguments.

OpenURL can make your Internet environment a more fluid to place to live. It cuts down on your workload by providing a common interface which can be shared and that you only have to learn once. It'll be even more useful when more packages support it directly; many Vapor products already do. Documentation for building *OpenURL* support into your own application is shipped with the archive.

OpenURL is a neat concept. Quite why nobody thought of it before is beyond me.



The OpenURL preferences editor makes the configuring of Internet software easy.

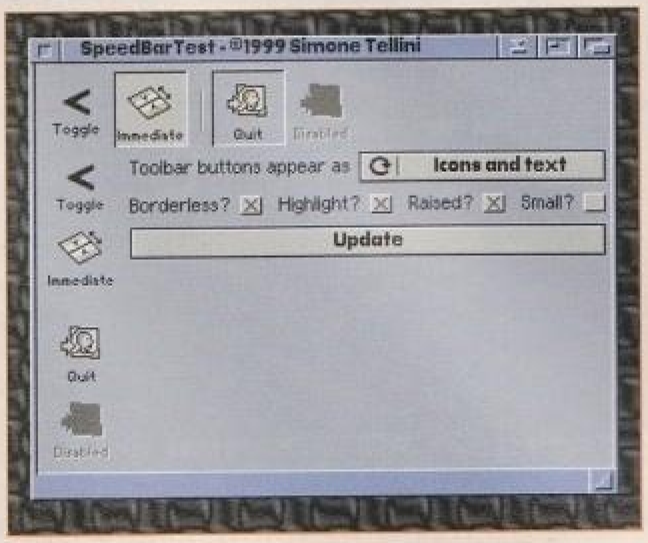
BY: Troels Walsted Hansen
WARE: Freeware
FROM AMINET: comm/sys/OpenURL30.lha
SIZE: 88K
REQUIRES: MUI

SpeedBar MCC V1.1

MUI, the Magic User Interface, may have its faults, but it is popular for good reason. Not only do interfaces built with MUI look great, but the range of plug-in extra gadgets for it means it's immensely powerful.

This new MUI class, the *SpeedBar* gadget, allows you to add configurable button strips to your applications. If you don't already know what I mean, then take a look at the navigation buttons in *Voyager3*. The user can choose how the buttons look, whether they have images or text or both, whether they have borders and whether an individual button becomes highlighted when the mouse pointer is positioned over it.

If you have already downloaded the *V3* pre-release than you will already have this class installed on your system. However, what's new here is all the necessary documentation and compiler stuff to enable you to include *SpeedBar* strips in your own programs. There's also a quick but rather ugly demo to show off its capabilities.



Toolbar buttons appear as: Icons and text
Borderless? ☒ Highlight? ☒ Raised? ☒ Small? ☐

Don't be put off by the rather ugly and uninspiring SpeedBar demo.

BY: Simone Tellini
WARE: Freeware
FROM AMINET: MCC_Speedbar.lha
SIZE: 59K
REQUIRES: MUI

Magic Menu 2.29 beta

When Commodore released *OS3.0*, one of the features they added was 'NewLook Menus': gone were the horrible black menus of the previous release and in were nice, crisp, white ones. But while two-colour menus are fine for low depth screens, when you have more colours to play with they are just a tad boring. Here *MagicMenu* comes to the rescue.

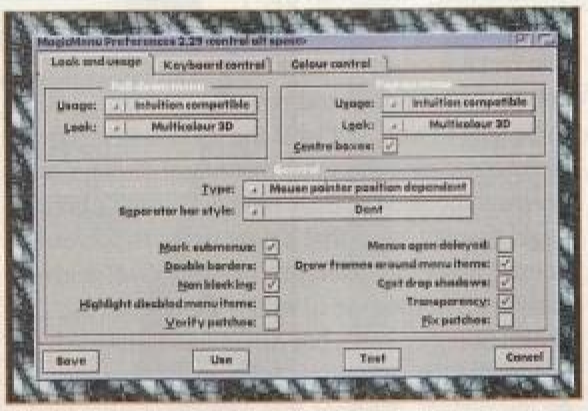
MagicMenu allows you to take complete control over how the pull-down menus appear on your Amiga. It performs this feat in a not entirely system-legal manner, but *MagicMenu* has proved itself very stable over the last few years. With *MagicMenu* you can change the pens used to render menus, give menus a XEN-like 3D effect and add drop shadows. It also allows pop-up menus.

Normally, holding down the right button somewhere on the screen will just reveal the active window's menu titles in the screen's title bar. A menu can be pulled down by positioning the pointer over the desired title. With pop-up menus, right-clicking outside of the menu bar will pop up a menu containing the menu titles at that position . This saves you all the effort of moving the pointer up to the top of the screen.

Another useful feature is that menus can be operated simply with user-definable keyboard shortcuts. With the default settings, menus can be activated by pressing the right Alt and Amiga keys together. The left and right cursors keys can then be used to select the desired menu and Return to pull it down. Cursor up and down are used to select an item from that menu, and Return to choose it. For users like me who prefer to use the keyboard as much as possible it is a real god-send.

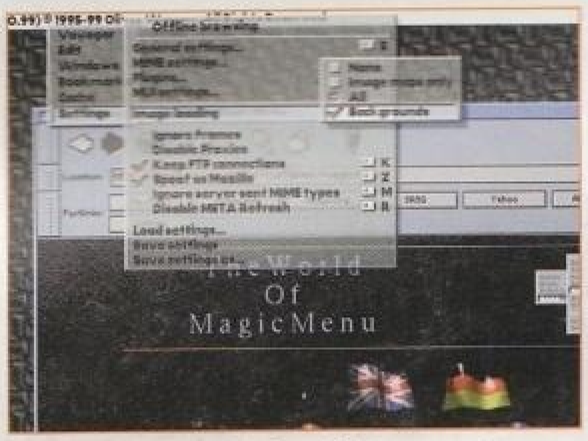
This new release of *MagicMenu* is a beta and as such hasn't made it to the Aminet yet; it's available only from the author's web page. Improvements on the previous version are largely to increase stability. One neat new feature, which looks great but is probably of limited usefulness, is translucent menus. The menu background colour can be made partly transparent so that the area over which the menu pops up is visible through the menu. This only works on high-colour or true-colours screens, however.

I've been using *MagicMenu* for ages and I would find it hard to live without it, if only for the keyboard activation of menus. It is one of those commodities whose functionality, if the OS3.5 team had had more time, would have been an invaluable addition to the new OS release.



Usage: Intuition compatible
Look: Multicolour 3D
Usage: Intuition compatible
Look: Multicolour 3D
Centre boxes: ☑
Type: Mouse pointer position dependent
Separator bar style: Dent
Mark submenus: ☑
Double borders: ☐
Non blocking: ☑
Highlight disabled menu items: ☐
Verify patches: ☐
Menus open delayed: ☐
Draw frames around menu items: ☑
Cast drop shadows: ☑
Transparency: ☑
Fix patches: ☐

There are loads of new options in MagicMenu's preference editor.



See-through menus look cool but can confuse.

Continued overleaf ➡

BY: Martin Korndörfer, Olaf Barthel and Mario Cattaneo
WARE: Giftware
FROM: http://fsinfo.cs.uni-sb.de/~cattaneo/magicmenu/
SIZE: 210K

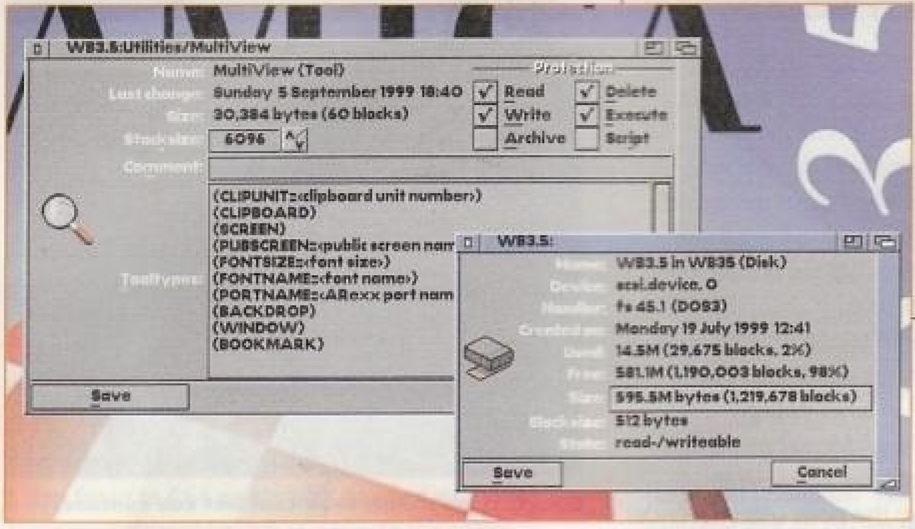
RAWBInfo 1.3

AmigaOS3.5 has barely hit the streets and there is already software which takes advantages of its new features being uploaded to the Aminet. One such is *RAWBInfo*.

This program replaces the usual WB3.5 icon information requester with a better-looking and more useable Reaction-based one. It's not a hack, however. The workbench.library has included a function to open the info requester from any program since version 3.0. This function can be patched in a perfectly legal manner just like any other library function.

The *RAWBInfo* requester has features reminiscent of the old *SwazInfo* program and makes good use of drag and drop. Drop an icon on the Tool Types section of the requester and the Tool Types from that icon will be copied; drop one on the Default Tool and that will be copied; drop an icon elsewhere in the window and a new requester will be opened giving details on that object.

RAWBInfo gives a boost to a perhaps overlooked aspect of the OS3.5 desktop. Hopefully, this program is just the beginning of a flood of new software development for the Amiga, sparked off by the release of the new OS update.



WB3.5:Utilities/MultiView

Name: MultiView (Tool)
Last change: Sunday 5 September 1999 18:40
Size: 30,384 bytes (60 blocks)
Stack size: 6096
Comment:

Protection: ☑ Read ☑ Write ☐ Archive ☑ Delete ☑ Execute ☐ Script

Tooltypes:
(CLIPUNIT=<clipboard unit number>)
(CLIPBOARD)
(SCREEN)
(PUBSCREEN=<public screen nam
(FONTSIZE=<font size>)
(FONTNAME=<font name>)
(PORTNAME=<ARexx port nam
(BACKDROP)
(WINDOW)
(BOOKMARK)

WB3.5:

Name: WB3.5 in WB35 (Disk)
Device: scsi.device, 0
Handler: fs 45.1 (DOS3)
Created on: Monday 19 July 1999 12:41
Used: 14.5M (29,675 blocks, 2%)
Free: 581.1M (1,190,003 blocks, 98%)
Size: 595.5M bytes (1,219,678 blocks)
Block size: 512 bytes
State: read-/writeable

Save
Save
Cancel

We want information, information... Icon info improved for WB3.5 with RAWBInfo.

BY: Stephan Rupprecht
WARE: Freeware
FROM AMINET: util/sys/RAWBInfo.lha
SIZE: 16K
REQUIRES: OS3.5

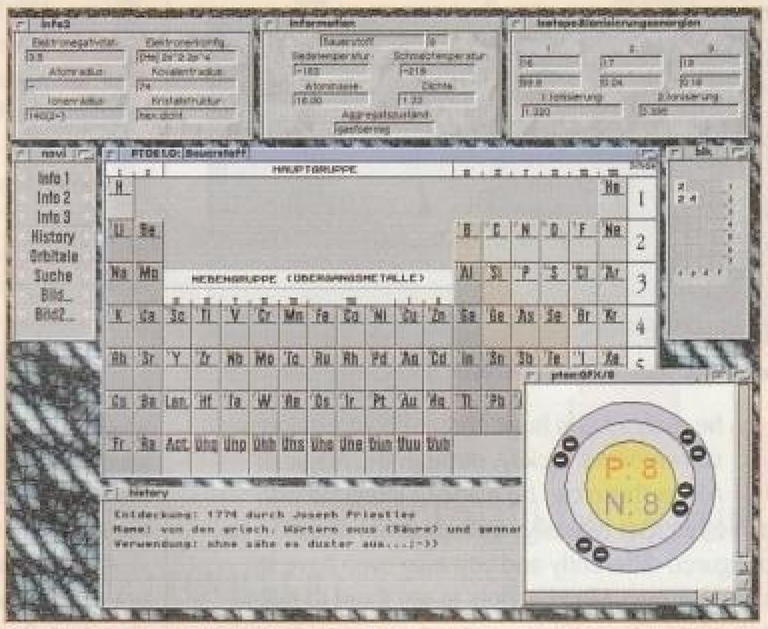
PTOE Demo

Kids all over world, when persuading their parents to buy them a computer, always play up its educational potential. "Yeah, it'll help me with my homework", they say. Well, this application, *PTOE*, might have been of some use to chemistry students, but it's been so poorly implemented that I doubt it.

***PTOE* stands for *Period Table of Elements*. It is meant to be an interactive version of one of those dry and dusty chemical data books. It presents you with a graphical version of the Periodic Table on screen. You can then select any of the elements and pop up windows giving information on who discovered the element and when, its atomic mass, isotopes, atomic and ionic radii, melting and boiling points, electron shells, and so on.**

This is potentially useful program, at least for reference purposes, but the interface is badly designed and it contains far too many bugs, occasionally throwing up a fatal run-time error. *PTOE* is shareware; this demo version's database only has entries for the first 10 elements. Selecting any other element does not tell you that you must buy the full version, it either displays empty tables or error messages. The search function doesn't work nor does the help and there is no documentation to speak of, either.

Such sloppily produced software will not encourage users to buy the full version, so the author is really doing himself a disservice. Give this a miss and stick to the paper tables.


navi
Info 1
Info 2
Info 3
History
Orbitale
Suche
Bild...
Bild2...
HAUPTGRUPPE
NEBENGRUPPE (ÜBERGANGSMETALLE)
History
P: 8
N: 8

Elementary, my dear Watson. The Periodic Table.

BY: Roman Schaub
WARE: Shareware
FROM AMINET: misc/sci/ptoe_demo.lha
SIZE: 161K

ABeat 1.7

Those Swiss chaps have some funny ideas: cuckoo clocks, yodelling and now Internet Time – or Swatch Beat Time.

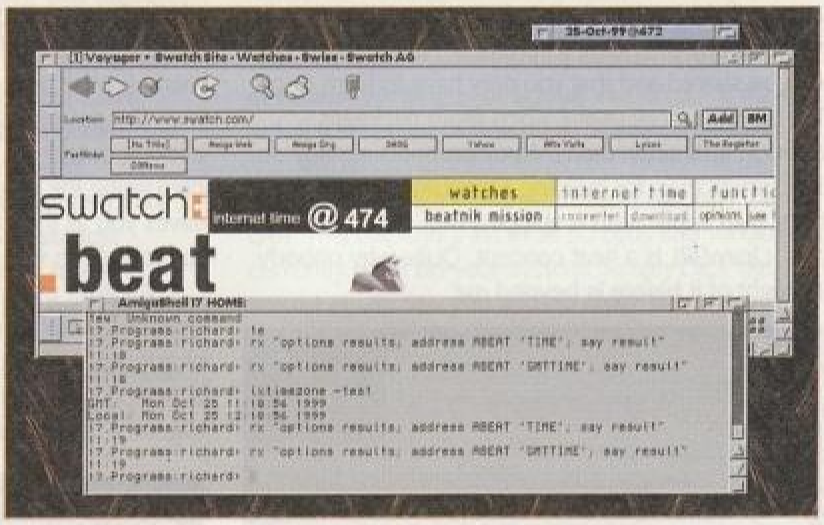
Beat Time is a new, decimalised, global time system. The current time in Beats is the same all over the world. The rationale is that it makes it easier for people in different conventional time zones to synchronise activities. You don't need to know what the local time is for a friend or colleague to arrange a virtual meeting: Beat Time is Beat Time.

The day is divided into 1,000 beats and the meridian for measuring Beat Time is Biel, Switzerland (funnily enough, the home town of Swatch). Beat Time starts at @000 in what we would call midnight Central European Time. By a process of arithmetic, a single Beat works out at about 1 minute 26 seconds.

Now this may all sound rather alien, contrived even – but that's the whole point. It forces you to think about time in a completely different manner. Whether it will ever catch on is another matter. Europe managed to resist Napoleon's attempts to decimalise time; can we withstand Swatch's?

ABeat is a program for Amiga owners who do not wish to get left behind in this temporal revolution. It is a simple clock utility which will calculate and display the current time in Beats and display it on a window on your Workbench screen. It has loads of options including, for all us Luddites, the ability to display local time and GMT and even has an alarm clock.

One problem with the Amiga is that is has no built-in facilities for coping with Daylight Savings Time, but various ingenious Amiga users have devised programs to work around this shortcoming. ABeat can use the facilities of many of these – in fact it is crucial that ABeat knows the local time and zone to be able to work out what the current Beat Time is. By comparing the value that ABeat displays on my machine and the Beat Time on Swatch's home page, it would seem that it does work. However, it doesn't know the difference between GMT and local time. At the time of writing we are still in British Summer Time, but ABeat fails to take account of the difference. Every other program on my system, the ones that care about what time it is anyway, can work out GMT correctly.


25-Oct-99 @472
[1] Voyager • Swatch Site - Watches - Swiss - Swatch AG
Location
http://www.swatch.com/
Add
BM
swatch
internet time @ 474
watches
internet time
beatnik mission
.beat
AmigaShell 17 HOME:

```
few: Unknown command
17.Programs:richard> le
17.Programs:richard> rx "options results; address ABEAT 'TIME'; say result"
11:18
17.Programs:richard> rx "options results; address ABEAT 'GMTTIME'; say result"
11:18
17.Programs:richard> ixtimezone -test
GMT:   Mon Oct 25 11:18:56 1999
Local: Mon Oct 25 12:18:56 1999
17.Programs:richard> rx "options results; address ABEAT 'TIME'; say result"
11:19
17.Programs:richard> rx "options results; address ABEAT 'GMTTIME'; say result"
11:19
17.Programs:richard>
```

The latest Internet fad is decimalised time. Join in with ABeat.

Apart from this one blip, ABeat does its job adequately. Whether it'll ever be anything more than a novelty remains to be seen.

Richard Drummond

BY: Nils Goers
WARE: Freeware
FROM AMINET: util/time/ABeat.lha
SIZE: 12K

Official Government & Educational orders welcome

Tel: 01543 250377

or send cheques to:

Owl Associates Ltd

Dept 698, Windsor Business Park, Trent Valley Road, Lichfield, Staffs WS13 6EU

Normal UK Delivery £2.00, Next Day £7.50
All Prices INCLUDE VAT (@17½ %)

E&OE

Printer Ribbons

BLACK	1 off	2+	5+	10+
Amstrad DMP2000/3000	2.80	2.65	2.45	2.25
Amstrad PCW8256/LQ3500	2.85	2.70	2.50	2.30
Citizen 120D/LSP10/Swift 24/9	2.85	2.70	2.50	2.30
Epson LQ100	4.10	3.95	3.75	3.55
Panasonic KXP2123/2124/2180	4.95	4.80	4.60	4.40
Star LC10/20/100	2.29	2.14	1.94	1.84
Star LC200	3.00	2.85	2.65	2.45
Star LC24 – 10/20/200	2.86	2.71	2.51	2.31
COLOUR				
Citizen 224, 240, Swift 24/9	8.99	8.84	8.64	8.44
Panasonic KXP2123/2124/2180	8.99	8.84	8.64	8.44
Star LC10/20/100	6.00	5.85	5.65	5.25
Star LC24 – 10/20/200	9.63	9.48	9.28	8.88

These are just a small selection of our Compatible Ribbons – Ring for those not listed

Ring us and *WE WILL BEAT* all other Ribbon prices

Laser Toners

Ring for Toners not listed

HP Laserjet II/III	35.00 each
HP Laserjet IIP/IIIP	40.00 each
HP Laserjet 4L, 4LM	50.00 each
HP Laserjet 4, 4M	65.00 each
Panasonic KXP-4410/4430	20.00 each
Panasonic KXP-4400/5400	17.00 each

High quality re-manufactured toners - originals also available

Miscellaneous Items

100 3½" Disk Labels	1.99
1000 3½" Disk Labels	8.99
1000 White Tractor Feed 3½" Disk Labels	10.99
3½" Disk Cleaning Kit	2.99
Parallel Printer Cable	3.99

Python 5 Joystick	10.99
Warrior 5 Joystick	10.99
Super Warrior Joystick	15.99
Skymaster Joystick	29.99

Dust Covers - Ring for prices

Branded CD-R

All supplied with cases

1-9	1.90 each
10-19	1.80 each
20-49	1.70 each
50-99	1.60 each
100+	1.50 each

3½" Disks

	Bulk		Branded
	DD	HD	HD
10 Disks	£5	£6	£8
25 Disks	£10	£11	-
50 Disks	£16	£18	£24
100 Disks	£29	£33	£46

All disks Certified 100% *ERROR FREE* & Include *FREE* Labels

Disk & CD Boxes

3½" 100 Capacity Box	5.99
3½" 10 Capacity Box	1.50
2 Capacity CD Cases	0.75

Inkjet/Bubblejet Cartridges

	Compatible	Original
Canon BJ 10, 10ex, 10sx, 20	10.30	15.30
Canon BJ 200/10/30/40 Black	10.30	15.30
Canon BJC 210/40 Colour	--	18.20
Canon BJC 600/10/20 Black High Cap.	3.50	5.00
Canon BJC 600/10/20 Cyn, Mag or Yel	2.90	4.50
Canon BJC 4000/100/200 Large Black	--	21.50
Canon BJC 4000/100/200 Hd+Blk+Col	--	31.00
Canon BJC 4000/100/200 Small Black	2.90	4.50
Canon BJC 4000/100/200 Small Colour	4.90	10.40
Commodore MPS1270	--	10.80
Epson Stylus 400, 800, 800+, 1000 Black	4.90	8.50
Epson Stylus Colour, Pro XL Black	4.90	9.70
Epson Stylus Colour, Pro XL Colour	7.90	19.60
Epson Stylus 820, Colour II/IIS Black	4.90	12.20
Epson Stylus 820, Colour II/IIS Colour	7.90	18.50
Epson Stylus Colour 200 Black	4.90	12.20
Epson Stylus Colour 200 Colour	7.90	20.00
Epson Stylus Colour 400, 600 Black	4.90	14.00
Epson Stylus Colour 400, 600 Colour	7.90	15.10
Epson Stylus Colour 440, 640, Black	4.90	15.80
Epson Stylus Colour 440, 640, 740 Colour	7.90	16.70
Epson Stylus Colour 740 Black	4.90	16.70
Epson Stylus Colour 500 Black	4.90	14.00
Epson Stylus Colour 500 Colour	7.90	20.00
Epson Stylus Photo 5 Colour	7.90	12.00
HP Deskjet 400, 500/10/20/40/50/60 Black	11.30	18.90
HP Deskjet 400, 500/40/50/60 Tri-Colour	--	20.90
HP Deskjet 600/60/90/93/94 Black	13.00	18.90
HP Deskjet 600/60/90/93/94 Tri-Colour	--	20.90
HP Deskjet 600/60/90/93/94 Photo Tri-Colour	--	27.30
HP Deskjet 820/50/55/70 Black	13.00	18.90
HP Deskjet 820/50/55/70 Tri Colour	--	20.20
HP Thinkjet/Quietjet	--	10.80

We also stock other cartridges & refill kits suitable for most inkjet / bubblejet printers. Ring for details & prices for those not listed

Inkjet/Bubblejet Refill Kits

Canon BJ 10/10ex/20/200/230	8.50 for 2 x 20ml Refills
Epson Stylus 400/800/1000	8.50 for 2 x 20ml Refills
Epson Stylus Colour Black	8.00 for 2 x 12ml Refills
Epson Stylus Colour Colour	10.50 for 9ml of each Col
HP Deskjet 500 Series Black	11.00 for 2 x 40ml Refills
HP Deskjet 500 Series Tri-Col	12.00 for 12ml of each Col
Star SJ48	8.50 for 2 x 20ml Refills

Inkjet Paper

Premium 90gm (50 A4 sheets)	6.99
Super Resolution 110gm (50 A4 sheets)	7.99
Double Sided Paper (30 A4 sheets)	7.99
* PhotoFlash Paper (20 A4 sheets)	9.99
* PhotoCards (20 127mm x 191mm)	6.99

* Both of these are instant drying and *WATERPROOF*

Transparencies (20 A4 sheets)	12.99
T-Shirt Printing Paper (10 A4 sheets)	10.99
Waterfast Canvas Paper (20 A4 sheets)	8.99
Two-View Cling (10 A4 sheets)	9.99
Silver Film (10 A4 sheets) (Enables printing of *METALLIC* pictures)	8.99

Quality Ink Jet Refills

Brilliant Colours, Dense Black, Superb Output

CARTRIDGES

BRITISH MADE!
GUARANTEED!
BEST VALUE IN UK!

Compatible Cartridges

(all the quality of the originals... but not the price!)

Epson Printers	(Col/Blk)
Stylus Col 2/2s/820	£9.99/£5.99
Stylus Col 300	£10.99
Stylus Col 400/600	£9.99/£5.99
Stylus Col 440/640/740	£9.99/£5.99
Stylus Col 500/200	£9.99/£5.99
Stylus Col 800/850/1520	£9.99/£6.99
Stylus Col 900	£9.99/£5.99
Stylus Col 1200	Please phone
Stylus Col/Pro/XL	£9.99/£5.99
Stylus Photo/700/750	£10.99/£5.99
Canon Printers	**(Col/Blk)**
4000 series	£6.99/£2.99
600 series	£2.99/£2.99
BJ70 (3s)	£12.99/£7.99
BJ30/70 (3s) Large	£8.99

A comprehensive written guarantee is available upon application. This covers both the quality and the safety of ALL cartridges.

Established in 1992 we have a proven record of quality service and quality products at low, low prices.
We could buy in cheaper cartridges and ink, but we don't.
SO NEITHER DO YOU?

Technical Support from Experts NOT a Switchboard Operator!

REFILL INKS

SIZE	VOLUME	COST	Cost per 20ml
Small	125ml	£14.99	£2.49
Medium	250ml	£24.99	£1.99
Large	500ml	£39.99	£1.66
Mega	1Litre	£69.99	£1.45

If you have not refilled before, you will require a starter kit. This will include instructions and all equipment needed. Please contact us for a specific Refill Instruction sheet.

Starter Kit: £2.50

DISCOUNT PACKS

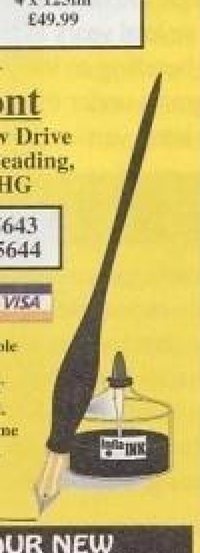
Tri Colour Pack	Quad Colour Pack
3 colours 3 x 125ml £39.99	3 colours + black 4 x 125ml £49.99

Selectafont

Dept AF, 25 Askew Drive
Spencers Wood, Reading,
Berks, RG7 1HG

Tel: 0118 988 5643
Fax: 0118 988 5644

Cheques and POs payable to Selectafont
All prices include VAT
P&P is just £1.00 total.
All Ink is dispatched same day by 1st Class Post.
Service with a smile!



CHECK OUT OUR NEW LOW, LOW, LOW PRICES!

White Knight Technology

Tel: 01920 822 321

9.30-5.30 Mon-Fri Fax: 01920 822 302
PO BOX 38, WARE, HERTS, SG11 1TX, UK

POWER UP
phase 5

We also supply most of Power Computing's Amiga range

We also supply:
Digitisers, Memory
Ethernet, Genlocks
Prices Include VAT

We are the UK's largest supplier of PowerPC cards

The new G3/G4 Generation:
CYBERSTORM G3/G4 BLIZZARD G3/G4

Order Your G3/G4 Now

NEW - G3/G4 Accelerators for A1200T's	
Blizzard G3/G4 300MHz, 1Mb cache	£ 495
Blizzard G3/G4 400MHz, 1Mb cache	£ 665
NEW - G3/G4 Accelerator for A3/4000/T	
Blizzard G3/G4 400MHz, 1Mb cache	£ 665
NEW - Graphics Card for G3/G4 Accelerators	
CyberVisionNG 32Mb, 128Bit, 3D, MiniPCI	£ 145
NEW - Options for G3/G4 Accelerators	
Ultra-2-Wide SCSI - Int. 68pin active term.	£ 120
Ultra SCSI - Internal 50pin connection	£ 65
Ultra DMA - IDE, 66MHz, 2 ports, 4 devices	£ 65
FireWire / i.Link / 1394 - 2 x 400Mbps ports	£ 85

Phase5 G3/G4 Specifications

PowerPC G3 (PPC750) based accelerator board for Amiga systems. Includes 1Mb backside cache and ZIF socketed processor. Takes up to 1Gb SDRAM in two banks, using DIMM's. Has two MiniPCI slots, one PCI expansion slot and two 12 Mbit USB ports onboard plus 2Mb FlashROM and 68K Emulation.

CYBERSTORM PPC — For A3000 A4000

233MHz with 040/25	£ 489
233MHz with 060/50	£ 699

Call for current availability

With Ultra Wide SCSI interface & socket for CyberVisionPPC. 4 x 72 Pin SIMM slots.

CYBERVISION PPC — BVision with 8Mb for £ 139

CyberVision PPC £149 for CyberStorm PPC & CyberStorm MK3. BVision £139 for the Blizzard 603e or Blizzard 603e+

CYBERSTORM MK III

with 060/50MHz £ 469.95 UW SCSI, 4 SIMM slots
with 040/40MHz £ 359.95 3000/3000T & 4000/4000T

BLIZZARD 1240-T/ERC	BLIZZARD 1260 Turbo Board	BLIZZARD SCSI-KIT IV	BLIZZARD 2040 ERC	BLIZZARD 2060 Turbo Board
40MHz 040 £149.95	50MHz 060 £299.95	For 1230-IV, 1240T and 1260 £69.95	40MHz 040 £269.95	50MHz 060 £369.95

Hard Drives 3.5"

4.3Gb IDE Ultra DMA	£ 95
8.4Gb IDE UDMA for OS3.5	£ 125
4.5Gb SCSI (Wide/Narrow)	£ 185

Drives available up to 50Gb - Call

CD CD-R CD-RW

48 Speed C/Labs ATAPI	£ 49
40 Speed Toshiba SCSI	£ 95
20/4/2 SCSI CD ReWriter	£ 219
16/4/4 SCSI CD ReWriter	£ 235

Note: These are all bare internal drives

Monitors - SVGA

15" Unbranded, 3 year warranty	£ 129
17" Unbranded, 3 year warranty	£ 199

Note: Graphics card or scandoubler required

Tower Conversions

Atéo Concepts

A4000 (10 Bays, 230W) only **£ 159**
A1200 (8 Bays, 230W) from **£ 135**

AteoBus
Expansion bus for A1200

AteoBus & Pixel64 Just **£ 235**
Graphics card & slots with P96 software.

Please Visit Our Website
*http://*welcome.to/white-knight
or: www.whiteknight.ukf.net
Email: amiga@whiteknight.

WE ACCEPT THESE CARDS :-
MasterCard, Visa, Delta, Switch
2.5% Surcharge on **Credit** card orders only
No Surcharges if using Switch or Visa-Delta
Please Call Us First To Verify Price & Availability Before Posting Any Order.
Goods Are Not Sold On A Trial Basis
Any unwanted or unsuitable items, if returned in pristine condition are liable to a min. 20% charge
This also applies to Cancelled orders, if accepted
Minimum Order Value £50 + P&P
Many prices subject to exchange rate

NetConnect 3

Active's new net suite falls just short of a Gold rating, but is well worth your money anyway. Why? Read on…

Serious

SERIOUS INDEX

A great bit of news this week (as I write this) is the fact that GTi in Germany, probably the largest distributor of Amiga CD-ROMs in the world, has stated that it will take quantities of titles that receive little attention in Europe and distribute them here on a commission basis. This means that programs like *CrossDOS*, *CrossMAC*, *Envoy* and the *Asimware* titles that aren't currently carried by any of the advertisers in *Amiga Format* can be stocked by them, or at least offered. Part of the problem arises because of the fact that many of the aforementioned titles are quite narrow in their scope and thus too specialised for many dealers to take in quantity. However, now that GTI have decided to offer these products wider distribution it should mean that it will be less difficult for your local dealer, or favourite mail order house, to carry them in their adverts and thus for you to buy them.

Hopefully this will mean that we should get a better influx of products next issue than we've had this, but in any case, those of you with a hankering for Windows95 filenames on PC0:, or the ability to read Mac disks, network your machine or convert and read CDs should no longer have an excuse for not doing these things on your Amiga...

Ben Vost

42 NetConnect3

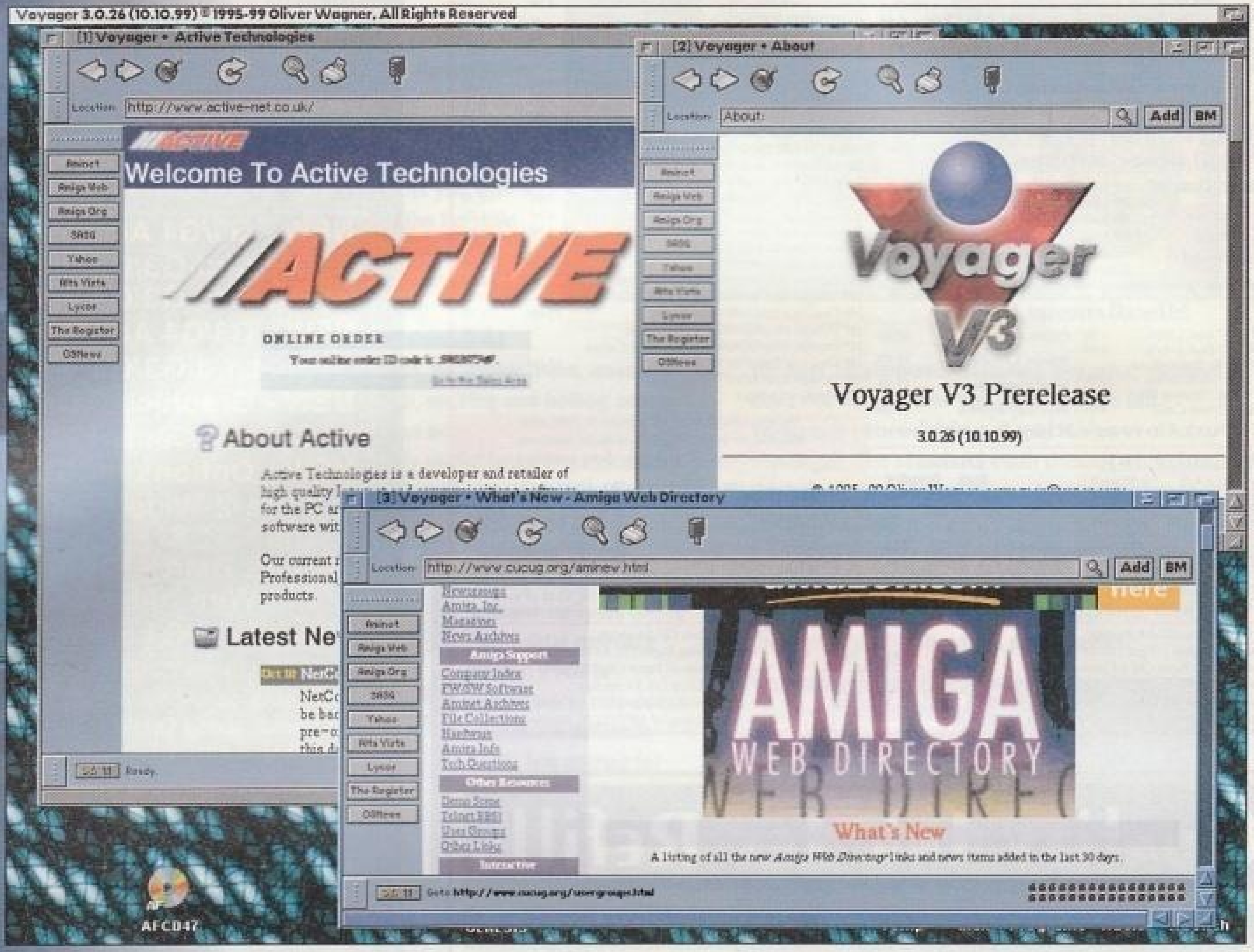
Richard Drummond gets netted with this Internet suite from Active Technologies.

46 The *MON Family

Simon Goodwin gets to grips with all the switches in all the colours from Eyetech.

48 PFS3

Slow drive, or slow filing system? Richard Drummond puts a replacement for FFS to the test.


Voyager 3.0.26 (10.10.99) © 1995-99 Oliver Wagner, All Rights Reserved
[1] Voyager • Active Technologies
Location: http://www.active-net.co.uk/
Welcome To Active Technologies
ACTIVE
ONLINE ORDER
About Active
Latest News
Ready.
[2] Voyager • About
Location: About:
Add
BM
Voyager V3
Voyager V3 Prerelease
3.0.26 (10.10.99)
[3] Voyager • What's New - Amiga Web Directory
Location: http://www.cucug.org/aminew.html
AMIGA
WEB DIRECTORY
What's New
A listing of all the new Amiga Web Directory links and news items added in the last 30 days.
Goto http://www.cucug.org/usergroups.html
Aminet
Amiga Web
Amiga Org
SASG
Yahoo
Alta Vista
Lycos
The Register
OSNews
AFCD47

Internet Explorer? Netscape? I wouldn't give them house room. Give me Voyager any day.

As one of Ben's email taglines proclaims, "an Amiga on the Internet is like a fish in water". This is a truism and is due partly to the Amiga's efficient operating system and partly to the wealth of great software available for the machine. Of all the developer's of Internet applications for the Amiga, the name that stands out is Vapor. For several years Active Technologies have been bundling an integrated suite of Vapor programs under the *NetConnect* name. The latest version, *NetConnect3*, contains improved versions of old favourites and three completely new packages.

> **Genesis comes with a wizard so that the novice Internet user doesn't have to bother fiddling with all the options and can get online without a fuss**

GENESIS

A TCP/IP stack forms the backbone of any computer's communication with the Internet. It is the conduit through which information flows between your machine and the rest of the world. The stack provided in *NetConnect3* is AmiTCP.

Originally, this package had a reputation for being difficult to set up, but this is no longer true. With *NetConnect2*, Active introduced *Genesis* – a flexible MUI-based interface for using and configuring the AmiTCP stack. The novice to the Internet doesn't want to have to bother playing about with the bewildering array of options that *Genesis* provides, so the package is also supplied with a wizard to set it up for you. The *Genesis Wizard* can get you online quickly and without fuss in less than a dozen mouse-clicks.

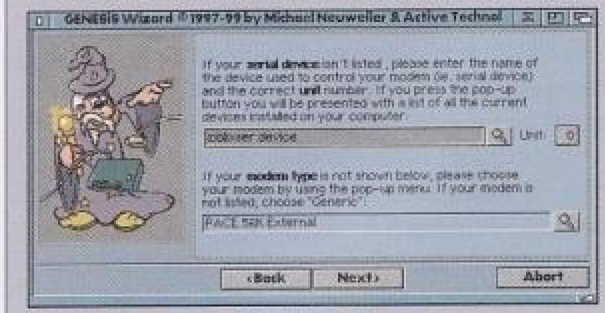
Genesis has many advanced features. It's multi-user capability allows the creation of separate password-protected accounts over which the root user has control, including the times at which they are allowed to connect. The head of the house-hold can curtail the children's surfing activities and stop them running up a peak-

INSTALLATION

I expect most *NetConnect3* owners will be upgrading from *NetConnect2*. Installation poses a problem, however, since you cannot simply update your existing installation: *NetConnect3* makes a new directory for itself. The reason for this is simplicity and it does save many potential headaches, but it means more work. You can import your old *Voyager*, *MicroDot* and *AmIRC* bookmarks and address books, but you cannot import any of the settings. Everything, right down to *Genesis* itself, will have to be re-configured.

GETTING ONLINE IN SIX EASY STEPS

Setting up your Internet connection is painless with the *Genesis Wizard*.


GENESIS Wizard ©1997-99 by Michael Neuweiler & Active Technol
Unit:
‹Back
Next›
Abort

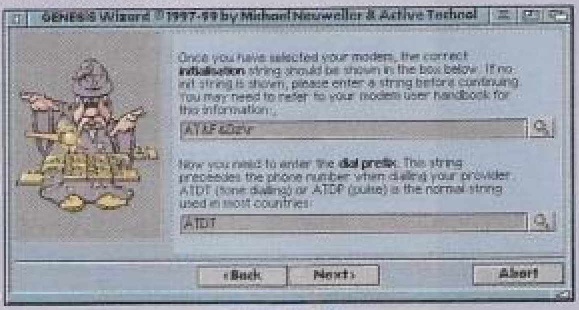
If your **serial device** isn't listed , please enter the name of the device used to control your modem (ie. serial.device) and the correct **unit** number. If you press the pop-up button you will be presented with a list of all the current devices installed on your computer.

ioblixser.device — Unit: 0

If your **modem type** is not shown below, please choose your modem by using the pop-up menu. If your modem is not listed, choose "Generic".

PACE 56K External

STEP 1


GENESIS Wizard ©1997-99 by Michael Neuweiler & Active Technol
‹Back
Next›
Abort

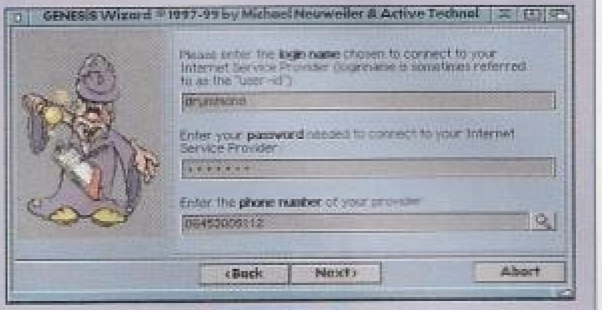
Once you have selected your modem, the correct **initialisation** string should be shown in the box below. If no init string is shown, please enter a string before continuing. You may need to refer to your modem user handbook for this information.

AT&F&D2V

Now you need to enter the **dial prefix**. This string precedes the phone number when dialing your provider. ATDT (tone dialing) or ATDP (pulse) is the normal string used in most countries:

ATDT

STEP 2


GENESIS Wizard ©1997-99 by Michael Neuweiler & Active Technol
‹Back
Next›
Abort

Please enter the **login name** chosen to connect to your Internet Service Provider (loginname is sometimes referred to as the "user-id")

drummond

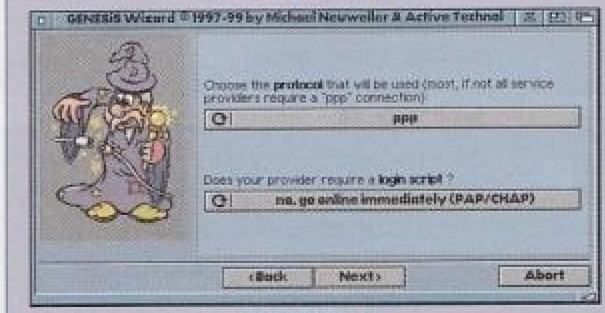
Enter your **password** needed to connect to your Internet Service Provider:

****

Enter the **phone number** of your provider:

00453000112

STEP 3


GENESIS Wizard ©1997-99 by Michael Neuweiler & Active Technol
‹Back
Next›
Abort

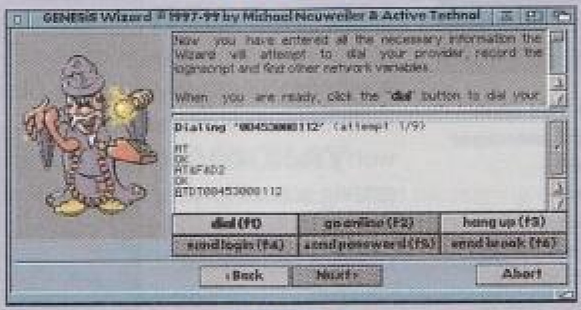
Choose the **protocol** that will be used (most, if not all service providers require a "ppp" connection):

ppp

Does your provider require a **login script** ?

no, go online immediately (PAP/CHAP)

STEP 4

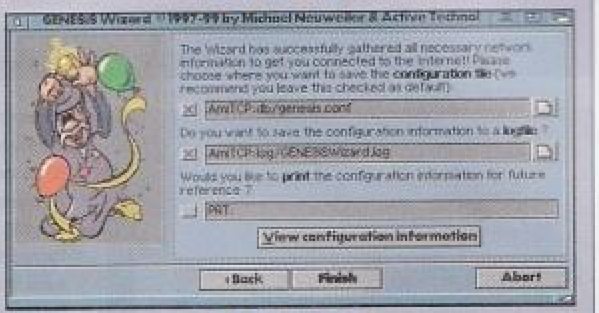

GENESIS Wizard ©1997-99 by Michael Neuweiler & Active Technol
dial (F1)
go online (F2)
hang up (F3)
send login (F4)
send password (F5)
send break (F6)
‹Back
Next›
Abort

Now you have entered all the necessary information the Wizard will attempt to dial your provider, record the loginscript and find other network variables.

When you are ready, click the "**dial**" button to dial your

```
Dialing '00453000112' (attempt 1/9)

AT
OK
AT&F&D2
OK
ATDT00453000112
```

STEP 5


GENESIS Wizard ©1997-99 by Michael Neuweiler & Active Technol
View configuration information
‹Back
Finish
Abort

The Wizard has successfully gathered all necessary network information to get you connected to the Internet!! Please choose where you want to save the **configuration file** (we recommend you leave this checked as default):

☒ AmiTCP:db/genesis.conf

Do you want to save the configuration information to a **logfile** ?

☒ AmiTCP:log/GENESISWizard.log

Would you like to **print** the configuration information for future reference ?

☐ PRT:

STEP 6

STEP1. Select the device driver and unit number for the serial port that your modem is connected to and your modem type. Typically the serial port will be the built-in Amiga one and you simply accept the default serial.device, but if you have an add-on serial card, such as the IOBlix, you should consult the manual to find out the driver name.

STEP2: Select the initialisation and dial commands for your modem. If your modem is one of the supported devices, these will already be set correctly and you can just accept the default settings.

STEP3: Enter your account ID, password and the phone number of your ISP. You will get these details from your provider when you sign up for an account.

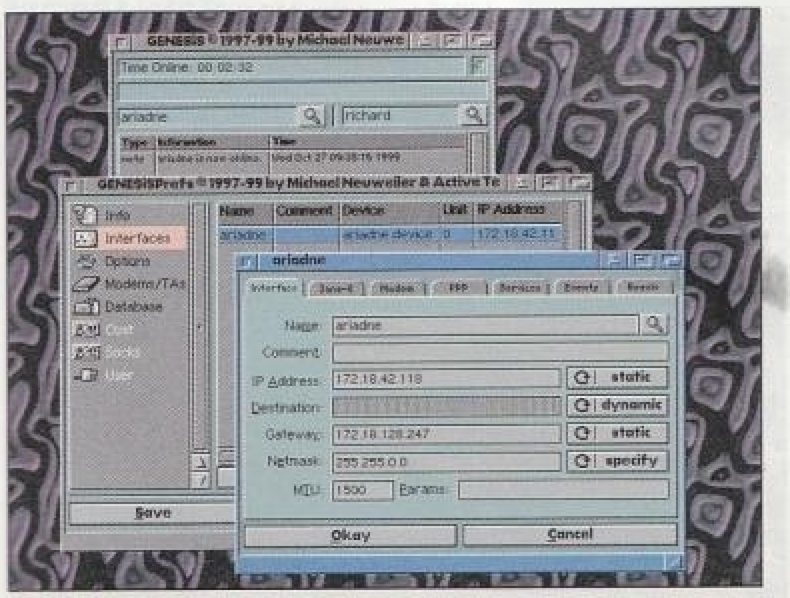
STEP4: Choose the protocol to connect to your account. Most ISPs these days use the PPP protocol and do not require a login script for modem connections, so you can accept the defaults here, too.

STEP 5: You are ready to try to connect. Hit the dial button and the Wizard will dial up your ISP and work out the rest of the details it needs automatically.

STEP 6: There is no step 6. You are done.

rate phone bill, for instance. *Genesis*'s cost reporting section keeps track of who was online when and can automatically calculate their share of the phone charges.

It doesn't stop there. *Genesis* supports multiple interfaces. That is, you can be connected to several networks at the same time. One interface might be through your modem to your Internet provider, another might be an Ethernet link to other computers in your house. The *Genesis Wizard* can set up a Ethernet link just as readily as a modem or ISDN adaptor and the documentation contains a detailed section on how to create your own LAN. *Genesis* also allows you to hook up to the Internet via a SOCKS server, that is, share a local machine's Internet connection.


GENESIS ©1997-99 by Michael Neuwe
GENESISPrefs ©1997-99 by Michael Neuweiler & Active Te
Info
Interfaces
Options
Modems/TAs
Database
Cost
Socks
User
Name
Comment
Device
Unit
IP Address
ariadne
Interface
Save
Okay
Cancel

Time Online: 00:02:32

ariadne — richard

Name	Comment	Device	Unit	IP Address
ariadne		ariadne.device	0	172.18.42.11

Name: ariadne

Comment:

IP Address: 172.18.42.118 — static

Destination: — dynamic

Gateway: 172.18.128.247 — static

Netmask: 255.255.0.0 — specify

MTU: 1500 Params:

If you don't like the settings that bloke with the wand gave you, they can be easily changed with GenesisPrefs.

Throw away that Filofax and use Contact Manager instead.

CONTACT MANAGER

If *Genesis* is the backbone of *NetConnect3*, then *Contact Manager* is its heart. It is not only a powerful address book for email addresses, websites, FTP sites, IRC and telnet servers, but is also the launching pad for the other components of the *NetConnect* suite.

Integration is the key to *Contact Manager*. It directly supports *Genesis*' multi-user capability: each account gets a separate database. And it knows how to communicate with the vast majority of Amiga Internet and communications software, not just Vapor products. Select a friend from the list of users, pop up a menu and you can launch your chosen email package and compose a new mail to them, fire up your browser to view their website, send then a fax or dial their phone number (with the built-in dialer).

Several of the Vapor packages – *mFTP*, *Voyager3* and *MicroDot-II* in particular – take this integration further by internalising *Contact Manager*. This means they directly use the relevant database. For other packages, *Contact Manger* can be made to automatically update its database by importing an external address book or hotlist whenever changes are made to it.

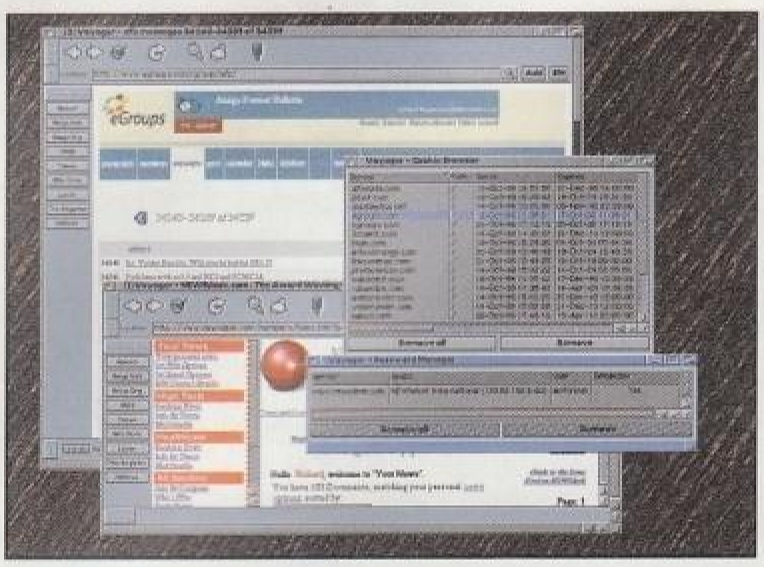
Configuration of *Contact Manger* can be tricky. The version that is shipped with *NetConnect3* is set up to use the main Vapor applications, but several key ARexx scripts are missing. It's probably a good idea when you get online to download the latest version of *Contact Manager* from Vapor's website and install it over the top of your existing one.

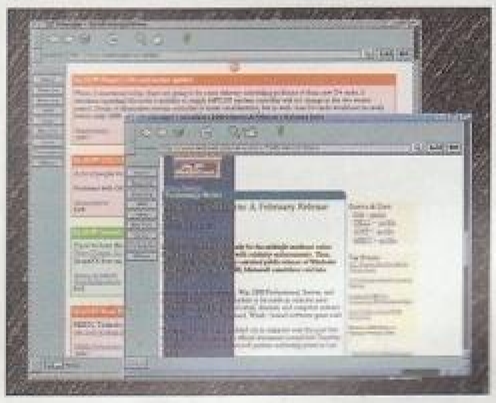
VOYAGER 3

The core of your Internet activity will probably be conducted with a web browser and *NetConnect3*'s browser is *Voyager 3*. This package has been a long time coming and is still only a pre-release version, but, boy, is it nice.

The new feature that Amiga owners have been clamouring for is JavaScript, the scripting language currently in vogue for jazzing up web pages. As this is becoming more and more prevalent on the web, the previous, JavaScript-less *Voyager* was becoming a bit restrictive. The JavaScript implementation in *Voyager* is not yet perfect, this is a pre-release after all, but this is at the top of the to-do list for the next update. Currently, it tends to spew out a lot of JavaScript errors when browsing. However, if you turn off the error-reporting function in the preferences, it copes with

Continued overleaf ➡





(Above) The new password manager and cookie browser.
(Left) The table layout in Voyager has been vastly improved, but it still gets new.com wrong.

the vast majority of pages that use JavaScript and a lot better than *iBrowse2*, for that matter.

Voyager3 has improved plug-in support and ships with a Shockwave player for flash movies. Amiga hardware is not really up to the task, but the player does cope well providing you have a fast processor and graphics card. A PPC version of the player is supplied for owners of dual processor machines, but is not noticeably faster than the 060 version.

Another aspect that has had a lot of work is *Voyager*'s HTML layout engine. The result is that more pages than before look how the author's intended them to look and that table-layout is much, much faster. Previously unsupported features like coloured links are now handled correctly.

The interface to *Voyager* is now much improved, too. There's the new navigation buttons, the cute but not very practical tear-off strips; the pull-down menus and the preferences sections have been re-ordered more sensibly. Also new is a cookie browser, which can be used to view and remove the settings that some websites store locally on your machine, and a password manager.

Voyager now handles local files and directories better, supporting drag and drop from the Workbench. Offline browsing is easier with an offline mode where the browser will always fetch pages from the Cache instead of querying a remote server.

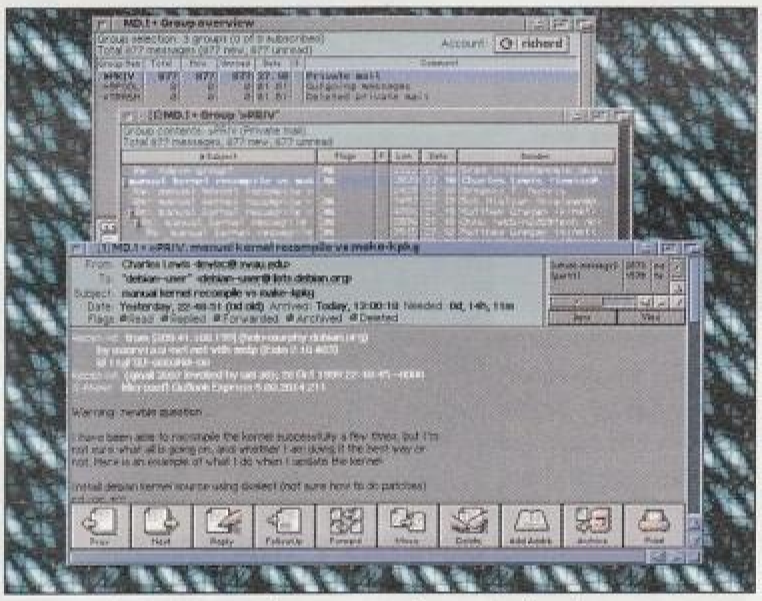
Few would now doubt that *Voyager 3* is the king of Amiga browsers and it keeps getting better with each update.

MICRODOT-II

MicroDot-II is the combined email and news client. It directly supports *Genesis*'s multi-user accounts, so you never need to worry about other members of the family getting access to your mail. Each account has an individual address book courtesy of *Contact Manager*.

Before you do anything, you'll need to configure your account. You need to fill in your email address, your real name and the host name of your email and news servers. It's annoying that you may only have access to one email box via one account. Many people have more than one email address these days, but you can set up extra accounts for extra addresses.

> *The interface to Voyager has been greatly improved with new navigation buttons and the cute, but not very practical, tear-off strips*



Don't be fooled by its pedestrian interface, MicroDot is a capable news and email client.

MicroDot has most of the features that you would expect. It handles filtering of mails to multiple folders, supports multiple email signatures, email attachments, PGP encryption, and so on. It doesn't support remote filters to avoid you wasting your online time downloading spam nor does it have a news killfile, but there is a mail download manager with which you can manually check your email box and delete anything you don't wish to download.

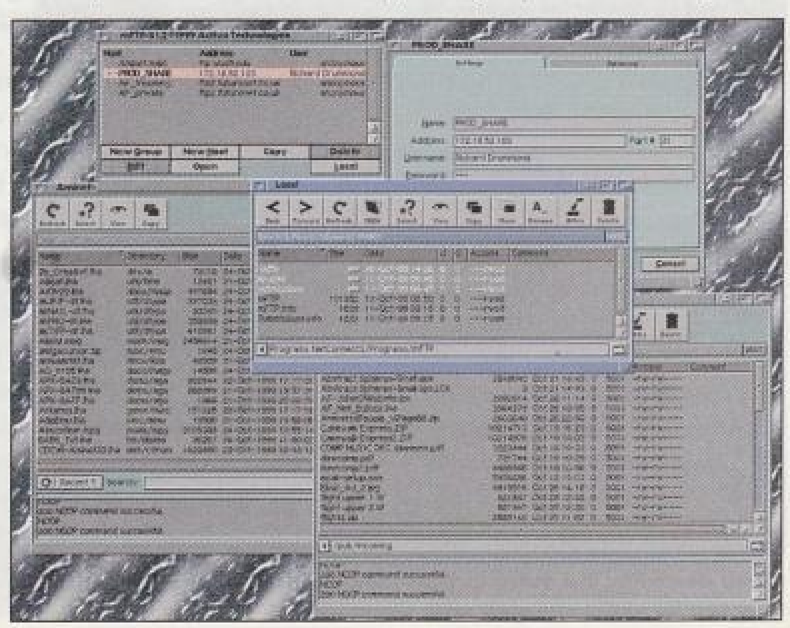
MicroDot is a very capable package, but I still prefer using *YAM* for mail. However, *MicroDot* does score over *YAM* in several areas. The former's interface is not so well designed and is noticeably slower than *YAM*'s, but *MicroDot*'s threading of mails is a big plus and the combination of mail and news in one package makes sense.

MFTP-II

The FTP client in *NetConnect* was *AmFTP*. This was showing its ages and has been retired to be replaced by a new package, *mFTP-II*. This, it must be said, is a vast improvement.

On loading *mFTP-II* you are presented with a hotlist of currently defined FTP sites. This is either a private list or *mFTP-II* can directly use *Contact Manager*. New sites can be added and configured with a powerful array of options. Like *AmFTP*, *mFTP-II* has a special ADT mode for Aminet sites, which automatically shows recently uploaded files and can perform searches. Unlike *AmFTP*, though, a great feature of *mFTP-II* is its asynchronous operation. You can connect to as many sites as you wish, simultaneously, even different directories on the same site. This means you can transfer files between FTP sites without having to store them temporarily on your machine first.

When you connect to an FTP site, you are presented with the contents of the current directory in a list window. This has browser-like navigation buttons along the top and the list can be sorted by name, size, date or (for Aminet sites) directory. Dual-list windows are also possible, showing a local directory on your hard drive as well as the FTP site. Alternatively, a local directory can be displayed in its own window. Either option means that transfer between the two is simply a matter of drag and drop. Files can be viewed with an appropriate viewing according to their MIME type using MIMEPrefs's settings.



Move over AmFTP. Your time is up. Make way for the all new mFTP-II.

TEETHING TROUBLES

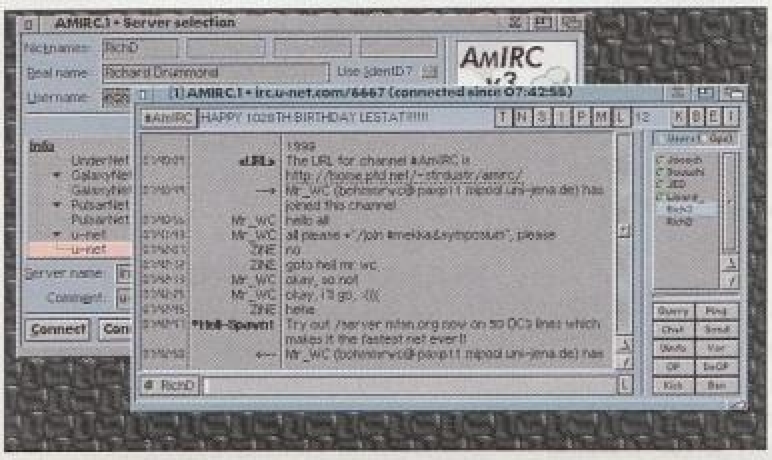
The *NetConnect3* was rushed through for releases and this, alas, shows in some areas. *Voyager3* and *MetalWeb* are still pre-release versions, the otherwise excellent and detailed documentation is incomplete and there are a few bugs. People have been reporting difficulties getting *Voyager3* to work at all, not something I encountered. Some of the MUI classes are new and still not entirely bug-free.

None of these problems are insurmountable but do detract from the excellent production quality of this CD. If you are having trouble with any of the packages in *NetConnect3*, the best answer is to download the latest version from Vapor's website and install it over the top. Also check that your MUI custom classes are up-to-date. These can also be retrieved from the Vapor site or from the Aminet.

UPDATES

Vapor are incredibly prolific when it comes to updating their software, so you'll want to get new versions of the individual packages as and when they come out. You will be automatically notified when new releases are ready when you go online and you will be given the option to fetch them there and then.

Previously, Vapor produced two versions of each package: a shareware version and a *NetConnect* version. The *NetConnect* keyfile wouldn't work with the shareware version, so *NetConnect* users had to wait for their own update, which generally appeared much later. This is no longer the case, and *NetConnect3* users can easily download the latest version from Vapor's website, happy in the knowledge that their keyfile unlocks the full features of each program.


AMIRC.1 • Server selection
Nickname: RichD
Real name: Richard Drummond
Use identD?
Username:
AmIRC v3
(1) AMIRC.1 • irc.u-net.com/6667 (connected since 07:42:55)
#AmIRC HAPPY 1028TH BIRTHDAY LESTAT!!!!!
Info
UnderNet
GalaxyNet
PulsarNet
u-net
Server name:
Comment:
Connect
Query
Ping
Chat
Send
Whois
Kick
Ban
RichD

It's good to talk... with AmIRC.

AMIRC

AmIRC is the best known and mostly widely used of Amiga IRC clients and rightly so.

IRC, Internet Relay Chat, is a system where users jacked into the net can communicate in real-time in special forums or channels. You can send messages publicly to everyone on the same channel or privately and exchange files. IRC has evolved its own culture and language and so can be a bit bewildering to the newcomer, but once you learn the customs and which IRC servers to avoid, it can be lots of fun.

The latest version, *AmIRC 3.0*, is not hugely different from the previous release. The GUI has been given a facelift in the new Vapor style, but otherwise looks familiar in design and features. It still has the powerful plug-in system for customisation, the easy-to-use multi-window GUI.

METALWEB

Another brand new package in *NetConnect3* is *MetalWEB 4*, a graphical web authoring tool. This is an update from the previous version 3, which was buggy and difficult to use. Thankfully, the program has been completely redesigned.

MetalWEB has a two-window approach. The HTML source code is displayed in one window, the laid out page in another. You can add HTML objects by selecting the relevant tool bar button and edit their styles in pop up windows. You can also directly modify the source code. It handles all the major HTML elements, such as images, tables, frames, forms and imagemaps. The program makes heavy use of context-sensitive pop-up menus to allow the simple arrangement of your page.

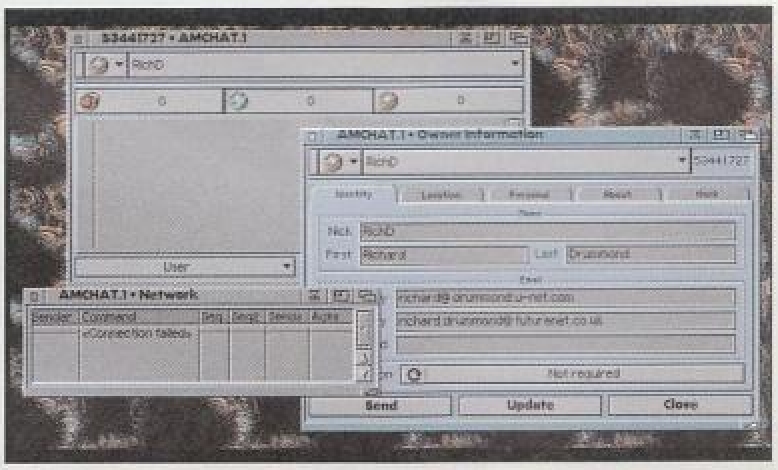
MetalWEB claims that it can be used with no HTML knowledge. To some degree this is true, but to get the best out of the package some grasp of the language is necessary. While die-hard HTML users might claim that all you need to create a web page is a text editor, the advantage of *MetalWEB* is that you can quickly see how the changes to a page take place. You no longer have to edit the source, save it and then load it into a browser. The HTML that *MetalWEB* generates is a lot less efficient than what you would create by hand, but its a great tool for initially putting together a site; once you've got the overall look you want, the HTML code can then be tweaked by hand.

AMCHAT

AmChat is an instant messaging client which uses Mirabilis's *ICQ* system. There are already several unofficial *ICQ* clients for the Amiga, all of dubious legality, but since its such a handy service most Amiga users are content to ignore this and just get on with using them.

AmChat is the best-looking of all the Amiga *ICQ*-alikes, boasting a pretty and well-laid out interface with pop-up menus. It is definitely a lot easier to use and less-cluttered than, for instance, *StrICQ*. You cannot register a new *ICQ* account with *AmChat*, however, so if you don't already have one then you'll have to download *StrICQ* or use a Mac or PC to do so. It also lacks many of *StrICQ* more advanced features like paging.

> *I wanted to give this an AF Gold as it's a fantastic collection of software that will serve just about all your Internet needs but it doesn't feel complete*



AmChat refused to connect for me at all. It does look pretty, though.

I could not get *AmChat* to work at all. I filled in my UIN details and selected an *ICQ* server, but the program stubbornly refuses to connect. As yet, there is no documentation for the package and no support page on Vapor's website. It is yet early days in *AmChat*'s lifetime, so I'm sure its shortcomings will be addressed in the next release.

AND THERE'S MORE

The other two packages in *NetConnect3* will be used less, if at all, by the average Internet user. *NetInfo-II* provides information on Internet hosts, whether web or FTP servers or whatever. You can trace the route to a host and it will report the details of each node between you and it and how long each hop takes. It can also report all the services that a host provides and finger users to show who is logged in and where. *NetInfo-II* has a much prettier interface than its previous incarnation, but doesn't have the full range of features.

AmTelnet provides a remote terminal to some host via the telnet protocol. This service is not generally needed much these days, except for maybe MUD, but it's a handy piece of software to have around when things go wrong. For example, you can telnet into your email server, issue mail commands directly and directly read the responses. If your email client is failing to connect, such a method will give you a greater insight into what the problem is.

I really wanted to give *NetConnect3* an *AF* Gold medal award. It is a fantastic collection of software that will serve just about all your Internet needs. The multi-user capability and the tight integration of all the packages adds even more value to the whole. *Voyager 3*, *mFTP-II* and *MetalWEB* are simply the best software in their respective categories. *Contact Manager* is unique, well-designed and immensely practical. However, *NC3* falls short of perfection. The superlative Vapor production values have been allowed to slide and some bugs and mistakes to creep in. This is not so damning as it might have been, since the *NetConnect3* user can get the latest updates from Vapor when they become available. But as it stands, *NetConnect3* doesn't feel complete.

Nevertheless, *NetConnect3* is still a collection of some of the best Amiga Internet software around at an incredibly attractive price. If you are thinking of buying yourself an early Christmas present, then this should be it.

Richard Drummond

SUPPLIER: Active Technologies
AVAILABLE FROM: Eyetech
01642 713185
PRICE: £49.95
REQUIREMENTS: Min WB3.0, 68020, 3MB RAM, ECS.

Pros and Cons

- + Multiuser capability and good integration of packages
- + Great value for money
- + Easy to use for the novice, powerful for a master
- − Rushed production means a few bugs have yet to be fixed

OVERALL VERDICT: A collection of the best Internet software for any computer platform.

89%

The *Mon family

We sift a bewildering variety of monitor and key switchers from Eyetech

KMon, SMon, BMon, CMon and XMon are switch units for people who want to use several video outputs on a single monitor. Keyboard proliferation is also addressed, so you can switch one PC keyboard between your Amiga and Windows or Linux at the same time.

> **EZ-Switch suits any keyboard or PC adaptor that can send an F10 code to the Amiga CIA; it works whatever the main Amiga processor is doing**

This makes good sense if you own a true multi-sync monitor, capable of handling any scan rate, and wish to put all your displays on that. If you've got a good monitor on a PC or Mac, and a scan-doubler or flicker-fixer to boost the Amiga's TV output to monitor rates, XMon lets you share that monitor between both machines.

You might own a graphics card without an internal monitor switch, and want easy access to that as well as Amiga native graphics. It might be a phase 5 or Ateo card, a vintage GVP Spectrum, or a second computer: another Amiga, CD^{32}, PC or ISA card accessed through a Zorro bridgeboard, for example.

Eyetech vowed to integrate switching better with the Amiga than passive switch boxes and signal-degrading adaptors. They made XMon, a switcher to select between two analogue video signals at any scan rate the computers can make and the monitor can handle, KMon, a 5-pin DIN keyboard diverter, and a dozen other cables and controllers to tie things together neatly.

KEY CHOICES

Eyetech's greatest innovation are EZ-Switches, for Amiga models from A600 onwards. These control monitor switching by snooping for keyboard signals. The ideal arrangement uses the unassigned blank key next to Return on International Amiga keyboards. This key is only needed for obscure languages, and otherwise pressing it has no effect.

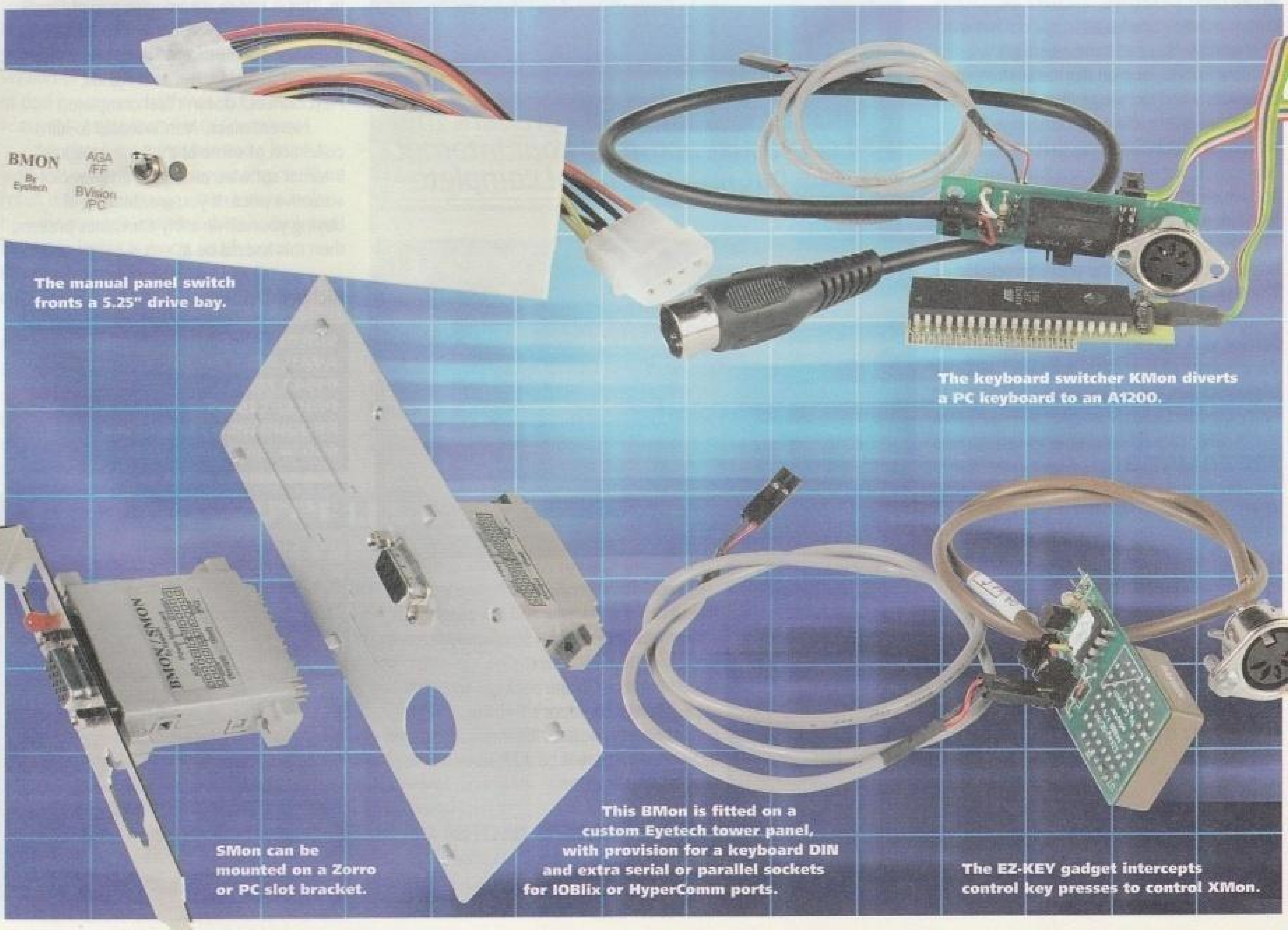
EZ-Switch sits on top of the CIA chip and monitors the signals from the Amiga keyboard control microprocessor, or add-on adaptors that plug in upstream. When they spot the control signal – the blank key, or F10, selected by a jumper – they toggle the state of a two-wire control output to XMon.

EZ-Switch suits any keyboard or PC adaptor that can send an F10 code to the Amiga CIA, including those from MicroniK and RBM. It works whatever the main Amiga processor is doing.

MANUAL SHIFT

The manual alternative is a toggle switch and light mounted on a plastic front panel for a 5.25" CD-ROM drive bay. This switch controls XMon regardless of your keyboard arrangements, deriving power from a through-port hard drive DC connector.

The manual switch can also toggle a keyboard at the same time as the monitor, using the last pair of pins on the XMon box



The manual panel switch fronts a 5.25" drive bay.

The keyboard switcher KMon diverts a PC keyboard to an A1200.

SMon can be mounted on a Zorro or PC slot bracket.

This BMon is fitted on a custom Eyetech tower panel, with provision for a keyboard DIN and extra serial or parallel sockets for IOBlix or HyperComm ports.

The EZ-KEY gadget intercepts control key presses to control XMon.

XMON VARIATIONS

The first and last letters indicate the intended application and connections for a particular XMon switcher. These are the prices for versions with a manual switch panel:

£39.95	BMon/F			
£44.95	BMon/V	BMon/A	CMon/F	SMon/F
£49.95	CMon/V	CMon/A	SMon/V	SMon/A

EZ-Switch costs £29.95 alone, or £19.95 as a replacement for the switch panel when you buy an XMon at the same time. An extra £10 gets you EZ-Key-Sw/A, which adds an A4000T keyboard input and feeds data into the CIA, as well as snooping for F10 or the blank key for XMon. As a neat side-effect, the original keyboard remains usable at the same time as the A4000 one, convenient for educators and comedy-writing teams.

A further £5 buys a trailing toggle switch, that reconfigures EZ-Key between F10 and the blank key at any time. Thus users with no blank key can momentarily get a raw F10 through to a PC or Amiga program that needs F10 for its own purposes, without inadvertent video switching. It's up to you to find a hole in which to mount this switch.

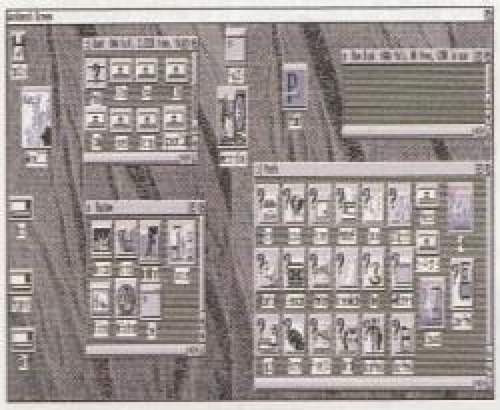
Three suffix letters indicate the type of Amiga video input. /F stands for internal flicker-fixer. BMon/F is the cheapest option, as one of the cables comes with the BlizzardVision or CyberVision PPC. You get the XMon unit, front panel switch, and a lead to a DCE internal flicker-fixer or scan-doubler, currently championed by Eyetech and Power.

The /V models come with a male 15-way SVGA high-density D lead, matching external flicker-fixers, or hybrids that fit on the Lisa chip and the 23-way Amiga video output. You could also use this with the output from the A3000's integrated flicker-fixer.

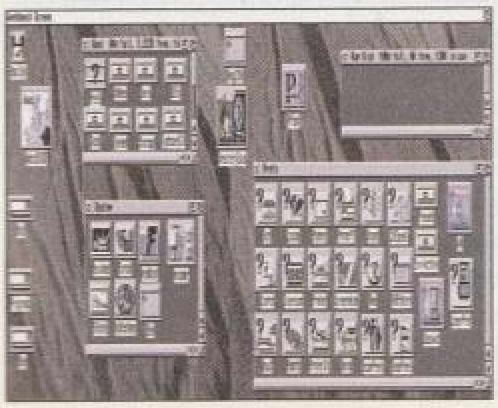
The /A suffix indicates a standard 23-way female Amiga D connector, requiring a true multisync monitor like a Microvitec or Commodore 1960 to enable all the Amiga modes as well as graphics card ones.

to control KMon. This suits Siamese Amiga/PC set-ups, when the panel switch is your only option; EZ-Switch snooping could not detect the keypress to switch back, once the input stream was diverted to the IBM…

KMon has a 5 pin DIN keyboard input socket you screw to the back of a tower, and a 5-pin DIN output plug for the other computer, typically a PC or an A2000. A second keyboard output IDC header can go to another DIN plug, or the Elbox A1200 adaptor. A flying lead forwards the switching signal from XMon.



Flicker-fixers make a mess of Super-High Res displays.



The same screen correctly shown on a PAL monitor.

VIDEO SWITCHES

XMon is the generic name for Eyetech's video switch box. This has a 15-pin high-density SVGA monitor output on the back and two sets of 10 video input pins on the other side. Between these, two pairs of pins carry control signals in and optionally out to KMon.

The analogue colour and digital sync signals are switched by three telecom relays. There's a slight blink, depending on your monitor, similar to NTSC/PAL switching when you press Space at Commodore's early startup menu. The only other components inside the plastic box, which resembles a serial port adaptor, are a couple of resistors and a red light next to the SVGA port, which goes out when the Amiga native input is active.

Eyetech fit XMon on a custom panel on their towers, which obscures the light, and in a card bracket with the light protruding through a D-type cutout next to the SVGA socket. They also offer the box as a loose item, though you'll want to fix it somehow to protect the push-fit input connectors.

BMONIC POSSESSION

BMon is the configuration custom-made for BlizzardVision and CyberVision PPC. It uses the 10-way cable supplied with those cards to feed the SVGA side of the XMon switch. There are three BMon variants, depending on the cable you need for Amiga native graphics.

CMon suits internal video from a Zorro Amiga with CyberVision 64/3D. Again three versions are suffixed to distinguish the Amiga input format. SMon units offer generic switching between Amiga and SVGA signals. Eyetech's packages and pricing depend on the number and complexity of the cables you need, as explained in the box.

INTEGRATION

Your Amiga set-up may inspire other possibilities. Super-High Res mode gives the best PAL and NTSC video titles, but flicker-fixers corrupt it, skipping alternate pixels, making it hard to see what you're doing. You could use SMon, with a custom cable or SVGA adaptor for the raw Amiga output, to view Super-High Res captions accurately on a multisync monitor, and switch to the flicker-fixer to make normal High Res interlace easier on your eyes.

You'll need another adaptor to switch between two Amigas, as the wiring of the inputs on the two sides of XMon differs. The right is set up for SVGA signals, while the left uses the alternative Amiga arrangement introduced by phase 5 then mimicked in DCE's best-selling internal flicker-fixers. XMon expects to switch between these two 'standards'. If in doubt, call Eyetech.

So far I've assumed that your graphics card does not have internal switching, but SMon can pass through modes like Super72 and HiGfx, which digital converters cannot. Or you could use SMon and KMon if you're happy with the Picasso IV 15kHz flicker-fixer yet also want a PC to share the same monitor and keyboard. You'll still need two mice…

Over the last month I've tested XMon and EZ-VGA, Eyetech's flicker-fixer, with a Z4 as well as a desktop A1200. The combination works well with a graphics card because of the neat integration of keyboard, video switch and flicker-fixer. As graphics cards become cheaper, more popular and more available to A1200 users, XMon and its family have a bright future, although the ideal set-up is rather expensive if you include all the switching options.

Simon Goodwin

XMon and EZ-Switch

SUPPLIER: Eyetech 01642 713 185.
http://welcome.to/amiga.world
PRICE: £39.95 to £84.90, depending on cable and switch options

Pros and Cons

- **+ Excellent keyboard integration**
- **+ Passes through AGA modes directly**
- **+ Adaptable for all SVGA outputs**
- **− Complicated options – call Eyetech**

OVERALL VERDICT: Turns SVGA output from an alternative into an integrated Amiga extension.

88%

KMon

SUPPLIER: Eyetech 01642 713 185.
http://welcome.to/amiga.world
PRICE: £19.95

Pros and Cons

- **+ Shares keyboard as well as screen**
- **+ Synchronised with XMon switching**
- **+ Suits Amiga/PC keyboard adaptors**
- **− Limited to manual switching from PC**

OVERALL VERDICT: A practical step towards multi-processing.

79%

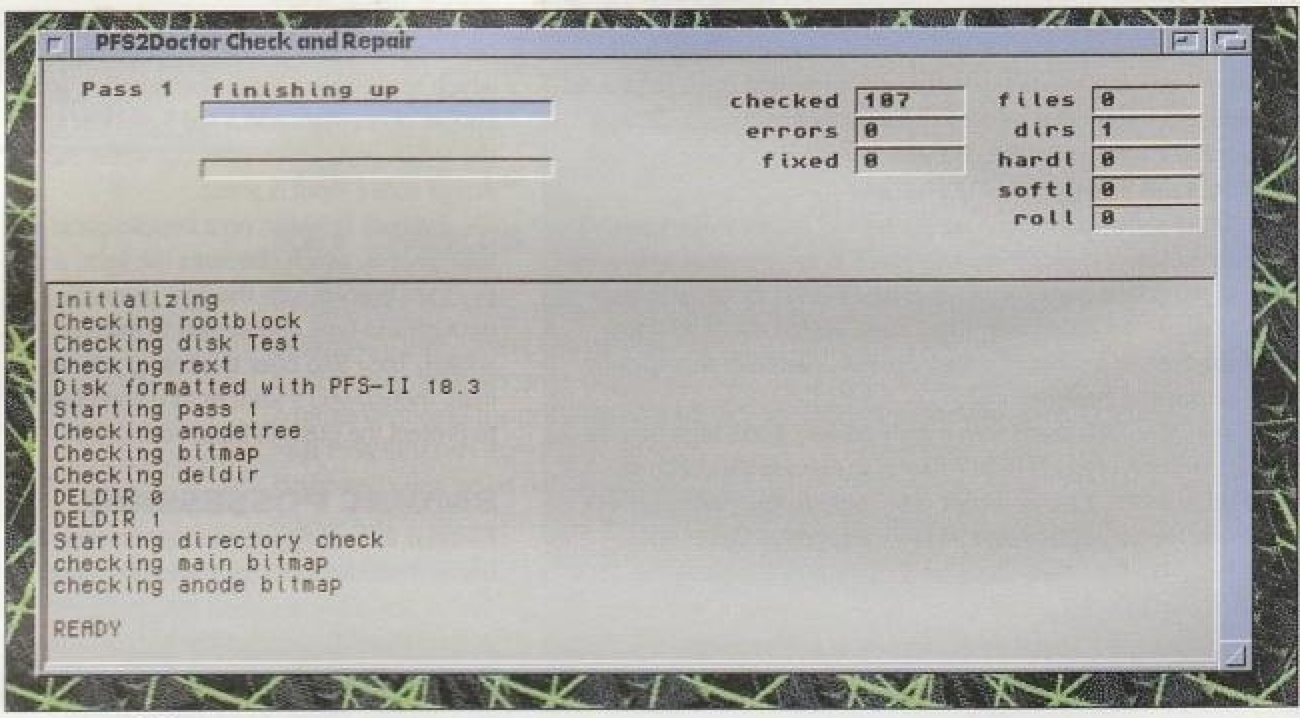
Professional File System 3

A file system is your personal security guard when it comes to safekeeping your files and retrieving them quickly but will PFS3 make the grade?

Some parts of a computer's operating system you want to be able to take for granted. Its filing system is just such a part. All that matters is that it manages the storage and retrieval of files to and from disk quickly and securely. Unfortunately, the filing system which Commodore shipped with AmigaOS from Workbench 1.3, the optimistically-entitled *Fast File System* (FFS), raises sufficient problems to be not easily ignored.

A solution to the defects of *FFS* is to try an alternative, like GREED's *Professional File System* (PFS). *PFS* has existed in various guises since 1993, but only became a fully-supported, commercial product last year when re-incarnated as *PFS2*. *PFS3* is the latest version and comes with some useful new features.

PFS3 is distributed on CD, upon which you get the filing system itself, support tools, detailed documentation and, as a rather dubious bonus, *Kang Fu*, GREED's contribution to the Amiga game market.



```
Pass 1   finishing up
                                  checked 107    files 0
                                   errors 0       dirs 1
                                    fixed 0      hardl 0
                                                 softl 0
                                                  roll 0

Initializing
Checking rootblock
Checking disk Test
Checking rext
Disk formatted with PFS-II 10.3
Starting pass 1
Checking anodetree
Checking bitmap
Checking deldir
DELDIR 0
DELDIR 1
Starting directory check
checking main bitmap
checking anode bitmap

READY
```

PFSDoctor failing to resurrect a quick-formatted partition.

Installation of *PFS3* is performed in two stages: first, the file system and tools are copied to your boot partition with the installer script provided; second, to actually format a partition with *PFS3*, you must use a tool such as HDToolBox to configure that partition and install *PFS3* on the RDB of the disk. Upgrading a partition from *PFS3* is a simple matter, just requiring the file system to be updated. Converting an *FFS* partition to *PFS3* is more involved: the partition must be reformatted and the contents restored from a backup.

> **PFS3 is safer than FFS because when a file is deleted it gets moved to a special, hidden directory in the disk's root where it can easily be recovered**

Several flavours of *PFS* are supplied.

- There are normal and so-called direct SCSI versions, the latter of which should be used on partitions located after the 4GB barrier on a disk. Multiuser versions of each are also provided. These are supposed to work with the multiuser.library system and give UNIX-like access privileges on files, but, as in *PFS2*, they are broken and unusable.

SECURITY AND SPEED

What benefits does *PFS3* offer, then? Well, the standard *FFS* is severely lacking when it comes to the safety of your data. One problem is invalidation. If your machine crashes while writing to an *FFS* partition, the partition will become invalid and hence unusable. Next time you boot your machine, the built-in revalidator will kick in and attempt to correct the situation. This can take several minutes for large partitions and might not even be able to effect a cure – a repair tool such as *DiskSalv* or a full restore, providing you have a backup, might be your only recourse.

All *PFS3* operations, on the other hand, are atomic. A *PFS* disk moves only from valid state to valid state. If a write operation is interrupted, then the disk will remain in its previous valid state. The changes resulting from any write access are committed only when the operation is complete. Revalidation is never required.

PFS3 is also safer than *FFS* because deleted files can be easily recovered. When a file is deleted it gets moved to a special, hidden directory in the disk's root called '.deldir'. To undo the deletion, just copy the file back again. A new feature with *PFS3* is that the size of .deldir may be configured by the user.

The other obvious advantage of *PFS* over *FFS* is speed. GREED claims a performance boost of up to 500 per cent. This is actually a modest claim; *PFS* can actually accelerate your disk access even further. You tend to notice the benefits most when several tasks are accessing the same drive simultaneously or with directories with many files. For example, if you make a *PFS3* partition for your web browser's cache or

WHAT'S NEW

LONG FILENAMES:

PFS3 now supports filename lengths up to the AmigasDOS maximum of 108 characters.

LARGER DELETE DIRECTORY:

User configurable number of entries (up to 993) in .deldir.

HDINSTTOOLS:

Oliver Kastl's free HDToolBox replacement is supplied with the package.

PFSDOCTOR:

Repair tool for PFS volumes.

PFSFORMAT:

A new command which can do full formatting of large drives and can set filename length and .deldir size. Italian version.

BENCHMARKS

Here we come to the point where the reviewer performs some utterly contrived tests to provide some guide to relative performance. The tests (shown right) were conducted with a 4.6GB Maxtor IDE hard drive connected to an A4000's internal ATA interface. A partition on this drive was formatted in turn with *FFS*, *PFS3* and *SFS*, each time with the same block size (512 bytes) and number of cache buffers (300). For each file system, a set of 1400 files (the contents of my overflowing email inbox), ranging in size from 400 bytes to 2.6MB and totalling 25MB, was first copied from one directory to another within the partition, renamed to another directory and then deleted.

The results clearly show how inadequate *FFS*'s performance really is: in the copy test *PFS3* was over seven times faster, *SFS* more than four. It is doubtful that you would see such a marked difference in everyday circumstances, but *PFS3* is notably quicker than *FFS*.

Filesystem test results in seconds

	COPY	RENAME	DELETE
FFS	254.72	103.04	7,74
PFS3	35,04	4.16	2.64
SFS	54.36	5.32	8.46

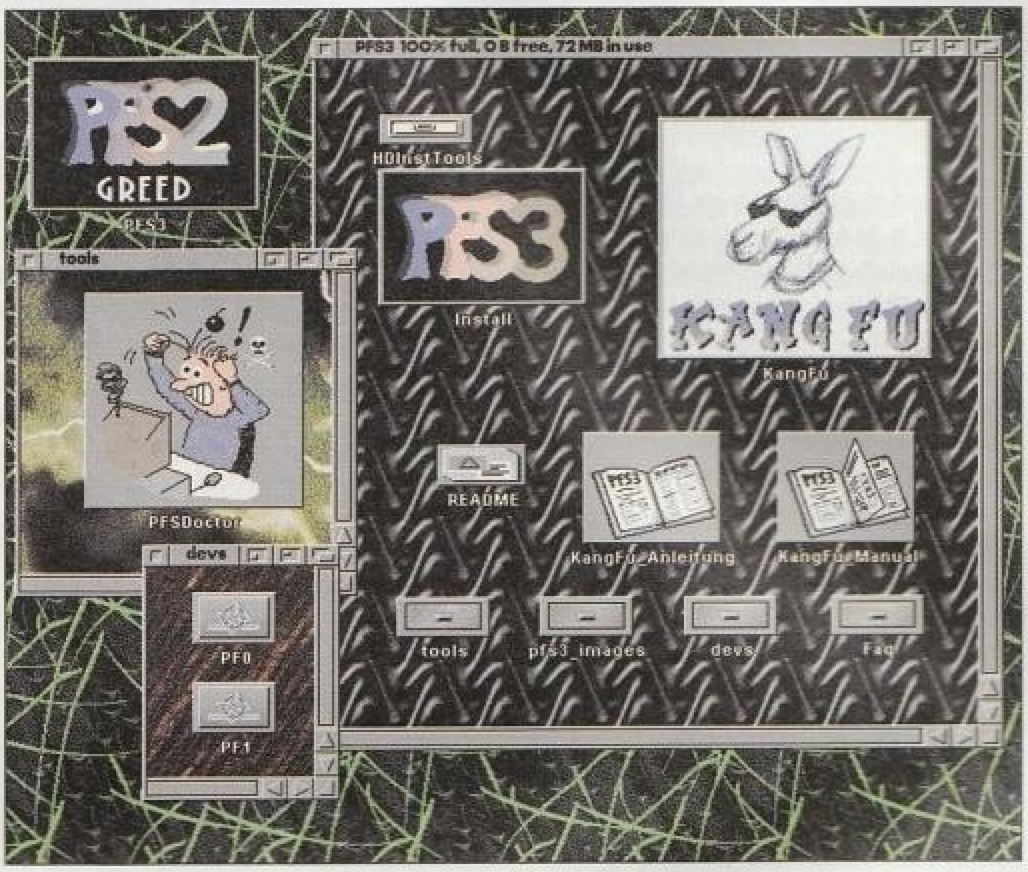
for storing your incoming email folder, the increase in speed is very obvious.

GOING TO PIECES

Security is not the only issue with *FFS*, there's fragmentation too. A fragmented file is one which is split over non-sequential blocks on a disk. This slows down disk access, because the drive may have to perform a slow seek operation to a non-local block in the middle of reading a file. *FFS* is prone to fragmentation, but at least there are several tools that one can use to periodically optimise *FFS* disks, to juggle around the disk blocks comprising each file.

PFS3, however, has no such tools. *PFS* does support live optimisation. That is, an optimiser can run in the background, defragmenting files as necessary and yet still allow normal disk access. No such optimiser has yet been released, despite long-standing promises. *PFS3* does try a lot harder than *FFS* to keep files unfragmented when writing, though. In fact, providing the disk is not too full, a file on a *PFS* volume can be defragmented simply by copying it. A dedicated and automated optimisation utility would still be a valuable addition.

PFS has another measure to combat fragmentation: rollover files. A rollover file is one that has had a maximum size set. When the file becomes larger than this size, it is truncated from the beginning. A typical application is for log files, a record of events that some applications produce. Log files are appended to regularly and can grow indefinitely unless manually deleted. By making such a file a rollover file, it will cause no further fragmentation once it has reached its maximum size.



Some of the contents of the PFS3 disc. Can you spot the mistake?

THE BAD STUFF

After reading all these wonderful things about *PFS3*, there are some things you should know before dashing out and buying a copy. Incompatibility is the first. Although, the majority of software will be unable to tell any difference between *PFS3* and *FFS*, software that examines the internal structure of a disk will most likely fail. This includes things like repair tools and optimisers. Backup software should cause no problems. Incompatibility with other operating systems may also be an issue. For example, if you have Linux installed on your Amiga, your *PFS* partitions will not be accessible from Linux.

The second problem is security. *PFS3* is sold as a secure filing system and, to be fair, it is damn near bombproof. But as a user of *PFS2* for over a year, I know from personal experience that it does go wrong occasionally. And the difference between *FFS* and *PFS* is that when *PFS* fails it does so in such a spectacular way that reformatting the offending partition is the only solution. It remains to be seen whether *PFSDoctor* can help in such situations.

Users who are still using *FFS* on all their partitions must be mad. *PFS3* is safer and faster, and, if used wisely, can make your Amiga a much more productive environment. *PFS3* is good, but, for what it offers, the price is rather steep, especially for an upgrade from *PFS2*.

Richard Drummond

> *Software that examines the internal structure of a disk could fail with PFS3 and incompatibility with other operating systems may be an issue*

A DOCTOR IN THE HOUSE?

One of the criticisms of earlier releases of *PFS* was that there were no repair tools. The Amiga user's friend, *DiskSalv*, is not compatible with *PFS* disks, so there was really nothing you could do when a *PFS* partition failed, other than restore from a backup. Of course, *PFS* hardly ever fails, so this is not so great a problem.

A new addition to *PFS3* is *PFSDoctor*. This program is supposed to be able to repair damaged *PFS* disks. Whether it does or not is another question. It is virtually impossible to deliberately corrupt a *PFS* partition, so I had nothing realistic to test it on. I did try quick formatting a *PFS* partition and then attempting a rescue with *PFSDoctor*, but to no avail. In contrast, if this were an *FFS* partition, then *DiskSalv* could resurrect it easily.

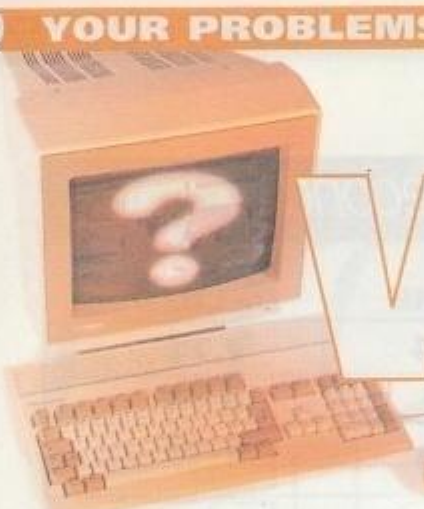
SUPPLIER: Ramjam Consultants Ltd. TEL. +44 (0)118 036 5940
http://www.ramjam.u-net.com/
PRICE: £40; upgrade from PFS2 £27.00 (both prices inc. P&P)

Pros and Cons

- + **Still offers added speed and security**
- + **Long filenames a great new addition**
- − **Multiuser version still broken**
- − **Expensive especially for an upgrade.**

OVERALL VERDICT:
Still the best Amiga filesystem, but still not perfect.

88%



Workbench

On the CD
-In the_Mag-/Workbench

Another issue, another well-matched set of questions and answers

Email: amformat@futurenet.co.uk, putting Workbench in the subject line, or write to: Workbench • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.

REAL SPEED

I have been an Amiga user for 10 years. My computer is an A1200 030/40 with 16MB RAM. I have recently purchased a Pace 56K modem with the *NetConnect 2* package. When browsing, *Voyager* states an access speed of about 3000 bps. This seems strange as I have a Hypercom1 board installed – is this because my system is only using an 030? Will a faster processor speed up Internet access?

N Ryan
Herts

This Pace Solo is as fast as modems get. Alas, it's still not quite fast enough.

Alas, that sounds about right for any dialup HTML connection, regardless of computer. When you're receiving large blocks of plain text from a local server, things like Usenet news and simple email transfers benefit from modem data compression, pushing peak transfers up towards 10K per second, but web access stops and starts as the connection is renegotiated for every file, so 3,000 bytes per second is a typical rate – you won't get much more over an analogue line, especially as HTML involves a lot of two-way negotiation.

Analogue modems transfer at less than a quarter the speed of floppy disks - and an Internet connection runs at the speed of the slowest link in the chain. Your ISP, Browser, and the intermediate Internet computers all limit speed. If you have a 56K modem and a buffered serial port, ideally set at 115200 baud or higher, the bottleneck is almost certainly upstream of your Amiga.

The 56K rate is the best possible – in fact no '56K' modem quite sustains 56 kilobaud on compressed data, and the limit when sending information down a good line to your ISP remains 33,600 baud. A faster processor will speed up things like JPEG decoding and table formatting, but not your telephone line.

PARALLEL SCANNING

Maybe I'm just not paying attention but nobody seems to have noticed scanners exist! A friend of mine can give me a Primax Colorado D600 flatbed scanner for £30 – I want it/one, but don't know if I can just put it in front of my printer in the parallel port like PCers do – and then there's the software…

I have a A1200 with 68030 accelerator and FPU, 32 meg RAM, internal hard disk, external modem and CD player and black and white printer (access to colour). Can I scan on what I've got or are we talking upgrades/add-ons? Does *PPaint7* or *Pagestream* cope with scans? Where do I start? – Help!

Mel Howarth
via email

My Amiga manual states that the Amiga can take Centronics Parallel scanners. Does this mean I can buy any parallel scanner in Dixons/Currys, etc. and plug & play? What software do I need?

Bill Power
Co Armagh

ScanQuix will support an Epson parallel scanner and integrates well with PPaint and Pagestream.

You can use parallel port scanners on an Amiga, but you'll need a hardware adaptor and the results arrive very slowly. SCSI scanners are more standard, much faster, and do not tie up the computer while they're working. Parallel port scanners suffer from a lack of standards in the hardware and software interface – like a lot of PC products, they promise far more than they deliver. Just try using the printer, or the rest of the PC, while you're waiting for the scanner and you'll soon realise that parallel port scanners are priced like toys for good reasons!

Scanning is time-consuming at the best of times, and pushing it through four lines designed to deliver printer status from a slow eight-bit port – which is the cheapo PC 'solution' – and is tortuous to say the least. You can bodge this to work on an Amiga by borrowing a line from another port, like the PD parallel Zip drivers, but the result is a mess.

The parallel port on IOBlix and Hypercom Zorro IO cards use PC chips so they work directly with PC peripherals – ScanQuix supports Epson parallel scanners via these ports, although SCSI is a much better option on an Amiga. ScanQuix integrates well with PPaint and Pagestream, and is the dominant professional Amiga scanning package.

We've put more than a dozen scanner drivers on the AFCD, supporting products from Agfa, Artek, Canon, Epson, HP, Microtek, Mustek, but not explicitly Primax, though BetaScan 2.15 claims to support 'virtually any' scanner. The vast majority of these are SCSI scanners, because if you're going to the trouble of writing a scanner driver you want one that is more than a toy. I suggest you get a SCSI interface first, then check out the software, and only then choose your hardware.

IT'S BILL AGAIN

I bought a PC laplink parallel cable and tried linking my two A1200s using both *ParNet* and *ProNet* without any success. How do I do this?

Bill Power
Co Armagh.

ParNet and ProNet need a ParNet cable, as the documentation explains. A PC Laplink cable won't work because only four lines are available lor input to a PC. The Amiga uses all eight lines for input AND output. MicroniK make and sell ParNet cables, if you don't wish to make your own. I got one at the Cologne '98 show, and Epic advertise them in AF every month.

A600 AND 68010

I have recently acquired a book called '*Amiga Tricks and Tips*' which has given me an idea on how to get my A600 working 10 to 16 per cent faster. In the section on hardware hacks it mentions replacing the 68000 processor with a 68010 processor, and I was wondering if this was possible on the A600 as well, being aware that even if it is I would have to mount it in a socket, but that if it is a direct replacement then why didn't Commodore use this in the A600 anyway? Please don't just say that I should get an A1200, as I already have an A4000,

Feedback

APOLLO REPAIRS

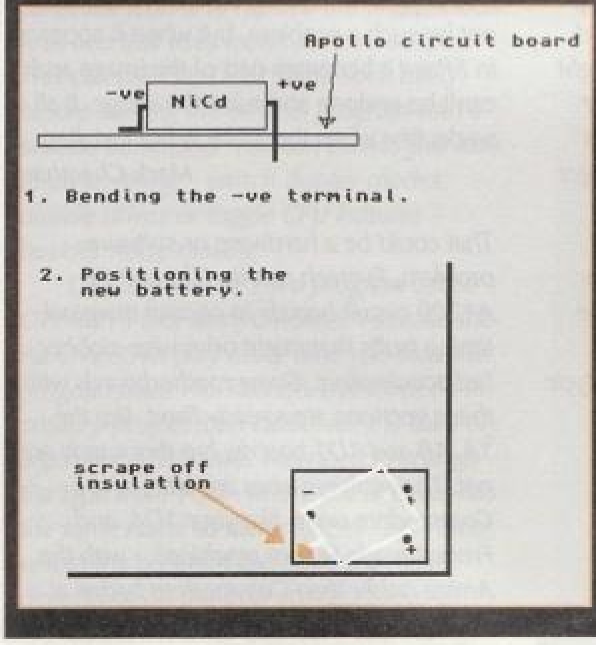
In the August "Workbench" column, Sean Eaton writes that he is unable to purchase a replacement button battery for his Apollo A1240. I had the same problem with mine. The Australian supplier that has since folded told us that the batteries were unavailable.

The "button" battery on the A1240 and A1260 cards is actually a 3.6V NiCd rechargeable. Similar types are commonly available to replace the batteries found on many PC (Yuk!) motherboards. as shown in the picture.

This is how I fixed my card and those of my friends. Firstly remove the button battery (carefully) from the Apollo board. Fortunately the positive and negative terminals are clearly marked on the Apollo board. Take careful note of which is which.

Using a pair of long nose pliers, bend the negative terminal of the new battery so that it sits flush against the board when the positive terminal is firmly in the positive hole. Refer to the diagram if this sounds vague. Remove the battery. Using a Stanley or Exacto knife (or similar) gently scrape away the insulation, leaving exposed copper where the negative terminal of the battery contacts the board. Solder the positive terminal of the battery in the hole, and solder the negative terminal to the exposed copper area on the Apollo board. You should now find that the clock is once again operational.

Leslie Ayling
Australia



This shows how Leslie fits the replacement Apollo battery.

This chip PC battery can stand in for an expired Apollo one.

That sounds like excellent advice, though not for the faint-hearted. Leslie is an Amiga expert who designed and made his own clock port IO card long before the commercial rush started. If you're less confident about your hardware skills, you may be better off paying Eyetech in the UK or Individual Computers in Germany to change the battery; both firms are experienced in Apollo repairs.

INDIGO REDEEMED

In reply to David Leavy's letter in your November 1999 issue, Indigo is a proper ISP, and they do unofficially support the Amiga. I use Indigo from my Amiga, and I have no problem using the built in serial port driver, and setup for PPP.

Originally I used *AmiTCP*. I currently use *Miami-DX* 0.9k. *MiamiInit* will set up for dialling into Indigo with no problems. Indigo Support are also kind enough to recognise the Amiga, and know a little bit about it. They only seem to know about *Miami*, though, as the only time I phoned them up they asked me if I was using *Miami*, or another TCP/IP stack. They can help if you have problems.

Gary Burke
Dublin

Thanks Gary. It sounds like David should try to open his account with the Miami demo, and perhaps support from Indigo, and then try NetConnect once he's got the account set up. I'm still keen to hear from anyone using NetConnect with Indigo – it sounds like it should be possible, but might need slight tweaks for that specific ISP.

CANON CONFUSION

In response to Bill Power's letter in your November issue (AF129), concerning half-width printouts on a Canon BJC 250, I to have experienced this problem, using both *Canon Studio* and *Turboprint* 7. The problem Bill is having is not to do with the printer drivers, but with the printer itself. The BJC's on-board configuration gets confused.

I found I could cure the problem by resetting the printer back to its factory defaults, either using the setup program provided with the *Canon Studio* software or by switching off the printer, waiting 10 to 15 seconds, then pressing and holding down the power button until you hear 10 beeps, before releasing the power button.

Mike Mayhew
via email

KALEIDOSCOPE REVISITED

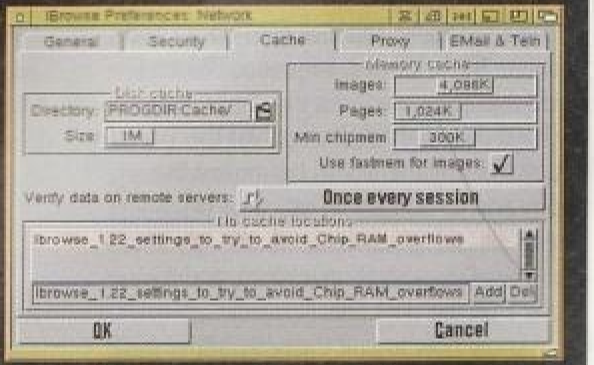
I have been reading for the past few months about the 'Kaleidoscopic Problems' that seem to be getting some folks down. This is because the chip RAM becomes exhausted, causing a crash.

The cure is to go into *Voyager's* Prefs, and turn the Image Cache off. This function should only be used if you have a graphics card. If this is left on and you don't have a graphics card you will not notice much; images will re-load faster, until the RAM gets full, then a crash will happen. This explains why you can then go back to a page after rebooting and it will work okay, when the chip RAM is free from clutter. Also if you have too much going on at once, the RAM gets full and the same crash will happen.

With the Image Cache turned off the RAM does not store up all the old images, so the chip RAM stays cleaner for longer. Graphics card users do not suffer from this problem much as they do not have the restrictions of two meg chip RAM.

Wombat Myers Jr
via email

I agree that many programs crash when they run out of chip RAM, and this is a particular problem with MUI applications like IBrowse and Voyager. However image corruption, rather than crashes, are a sign of the AGA hardware fault I've discussed in previous columns. Your advice may help Voyager users, and IBrowse can minimise problems by limiting cache sizes, directing images to fast RAM (see example Prefs) and disabling external image decoders which gobble chip RAM.



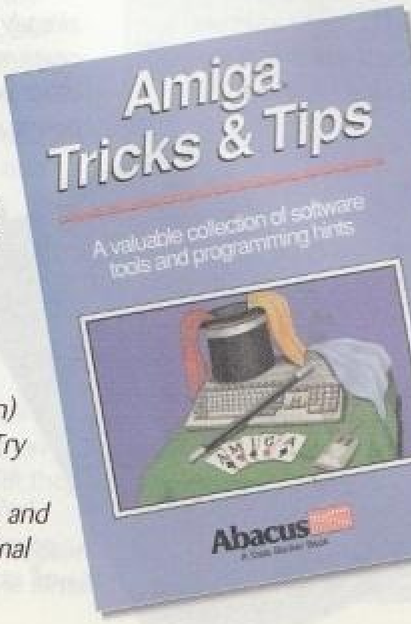
Directory: PROGDIR:Cache/
Size: 1M
Images: 4,096K
Pages: 1,024K
Min chipmem: 300K
Use fastmem for images: ✓
Verify data on remote servers: Once every session
Ibrowse_1.22_settings_to_try_to_avoid_Chip_RAM_overflows

Settings limit IBrowse's demand for chip RAM.

and still really enjoy playing with my A600.

Jeremy Spring
New Zealand

If you're willing to unsolder a 64-pin chip, you can indeed put a 68010 in an A600. You might be able to measure a speed boost on a few programs, if you use a stopwatch. You're far more likely to get Guru 80000008 reports (Privilege violation) on programs that used to run okay. Try it by all means, but be careful when attacking that precious motherboard, and use a socket so you can put the original 68000 back later.


Amiga Tricks & Tips
A valuable collection of software tools and programming hints
Abacus
A Data Becker Book

Getting the most out of your Amiga doesn't include sawing anyone in half, unfortunately.

The A600 is indeed a cool gadget, but a 68010 won't improve it much. This chip optimises certain pairs of instructions so that the second one, which repeats the first, does not need to be executed every time round a loop. It does speed up a few programs, but not as much as rewriting the program to 'unroll' the loop, so few properly-optimised programs gain any benefit.

Commodore didn't use the 68010 because the 68000 is cheaper, almost as fast, and more compatible. The 68010 works differently in Supervisor mode – to fix a problem with early 68K virtual memory systems – and this upsets programs like Transformer, CPE, Commodore's BBC Micro emulator, and many games and demos. However, Fix68010 and the PATCH option in TUDE can program around this.

The 68010 was the third chip in the 68000 family. Programs written for either 68000 or 68020 will run OK on a 68010, though typically at the speed of the former rather than the latter. There's lots of MC68010 information and patchers on this issue's CD.

Continued overleaf ➡

HUNK PROBLEM

I have an A600 with 2 Mb of chip RAM, a 1MB PCMCIA card formatted as fast RAM and a 120MB Toshiba 2.5" hard disk. My problem is with certain old games like *Theme Park*, *Nigel Mansell's GP*, and *PGA Tour Golf*. When I install these to my hard disk they all install okay, but when I try to run them I get an error message which says; BAD LOADFILE HUNK. What does this mean? Could my problem be the MaxTransfer on the hard disk? I have HDToolbox but how do I change the max transfer?

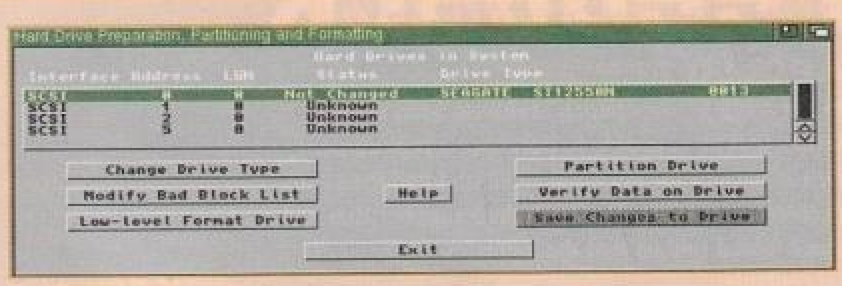
Glyn Astill
via email

The error message means that the program file is corrupt. Programs are loaded in 'hunks' and checked as they're stored in memory. That does indeed sound like a MaxTransfer problem, as games transferred to disk often use relatively large hunks, and small programs load without running up against the MaxTransfer limit of PC hard disks.

The lazy fix is to upgrade to Kickstart 3.1, which never tries to read more than a PC-sized segment in one go, at negligible cost in performance given the other limitations of IDE. The MaxTransfer problem comes about because IDE drives were made for PCs which are incapable of transferring large blocks of data in one go. The Amiga has no such limitation, so it exposes poorly-tested code in the drive firmware when more than 64K – one Intel segment – or 128K – the primitive drive buffer size – is stored or requested.

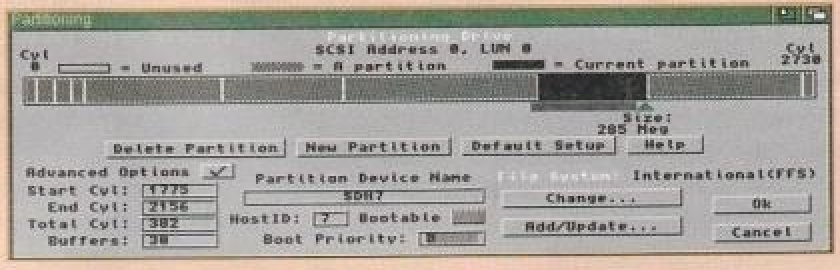
To limit the maximum size of transfers from any Amiga hard disk partition, you must run HDToolbox, in the SYS:Tools drawer. Select the drive, then press the 'Partition drive' button. Click on the partition you want to restrict, then select the 'Change…' button under the heading File System. Alter the 'Max transfer' value to 0xFE00, so transfers are limited to 127 half K blocks at a time.

Press Enter then select OK, and repeat this procedure for each partition on the disk, then select Save Changes on the first screen before you quit HDtoolbox. You'll probably need to reinstall the program files – just because the Amiga transferred them to the disk okay, does not mean they've been correctly stored.



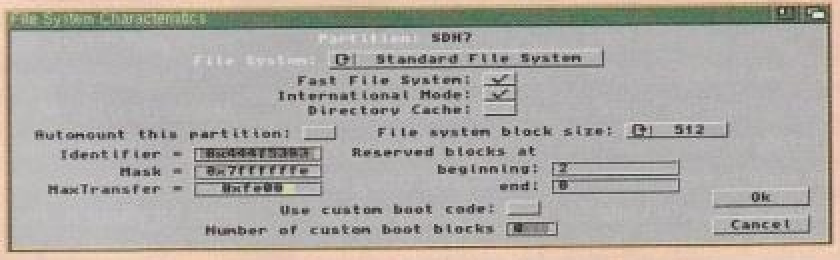
```
SCSI  0  0  Not Changed  SEAGATE  ST1255MN  0013
SCSI  1  0  Unknown
SCSI  2  0  Unknown
SCSI  5  0  Unknown
```

First you run HDtoolbox...



Advanced Options ☑
Start Cyl: 1775
End Cyl: 2156
Total Cyl: 382
Buffers: 30
Partition Device Name: SDH7
HostID: 7
Bootable
Boot Priority: 0
File System: International(FFS)

Then select the partition from the graphic, and click on Change...



Partition: SDH7
File System: Standard File System
Fast File System: ☑
International Mode: ☑
Directory Cache: ☐
Automount this partition: ☐
File system block size: 512
Identifier = 0x444F5303
Mask = 0x7ffffffe
MaxTransfer = 0xfe00
Reserved blocks at beginning: 2
end: 0
Use custom boot code: ☐
Number of custom boot blocks 0

Now adjust the MaxTransfer size by typing in a smaller value.

SECONDHAND BLUES

I've bought a secondhand Amiga A1200 a few months ago, with 10 meg inside, two extra floppy drives, and Kickstart v3.0. I am also (just) on the Internet. I wanted to load a compacted program from a floppy that also had other programs on it, (it was a free coverdisk) and in order to make it run I had to delete certain programs of the disk so the chosen program had room to work.

Then to make the disk auto boot I had to delete the s/startup-sequence. When I typed this command into the shell window, my hard drive light flickered. Not the floppy. Fearing the worst, I removed the floppy and re-booted. What came on screen was a big window welcoming me to the AmigaDos operating system, and a figure 1 on the next line.

I know how to edit the s/startup-sequence and re-install it, I just need to know what to type! I've thought about ringing other Amiga users, but there seems to be no way of viewing this information (is there?) I can't do anything other than play games at the moment.

Phill Addison
via email

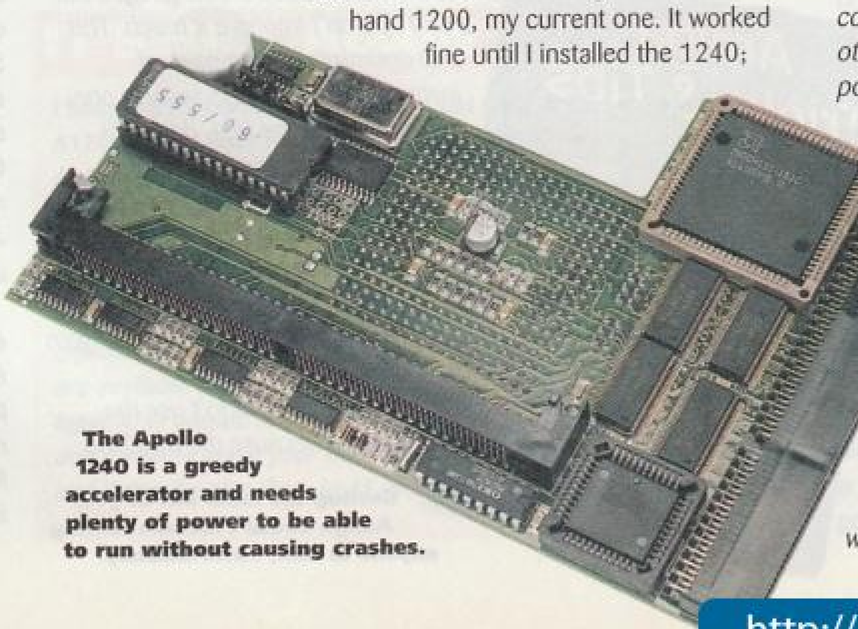
Run DiskSalv's 'undelete' from a bootable floppy. This only works if you've not already written the space where the startup was stored. Failing that, restore from your backup. What? No backup! Well, you're asking for trouble, but I'm benevolent. Restore from your original system disks. What? No system disks? You bought an Amiga without system disks? Doh! Buy a set from Epic or other advertisers, and consider upgrading to a current system (3.1 or preferably 3.5) at the same time. Then make a bootable floppy with DiskSalv on it!

I've put a generic Workbench startup-sequences for Kickstart 1,3, 2.0, 3.0 and 3.1 on the CD, for those of you who might have lost or irretrievably scrambled your originals. In general, before doing things that might smash a partition through finger trouble, type this command in a shell: LOCK WB: ON. This locks the partition (WB: in this case, but it could be DF0: or SYS: or Work: or whatever) so it can't be changed. When you're feeling reckless again, or need to change that partition, type LOCK WB: OFF.

GLITCHES

I have a 1200 rev 2B, OS3.0, Apollo 1240/25 (with big fan), 12x speed CD-ROM and 16MB fast memory. I originally had an A1200 rev 1D4 and it worked fine until it went dead for some unknown reason so I brought a second hand 1200, my current one. It worked fine until I installed the 1240; now games such as *Frontier* and *Settlers* randomly crash when the 1240 is installed, graphical garbage appears on Workbench and programs running on WB. This would not be such a problem, but when it appears in *PPaint* it becomes part of the image and can't be undone and ruins the image. It all works fine when the 1240 is not installed.

Mark Cheetham



The Apollo 1240 is a greedy accelerator and needs plenty of power to be able to run without causing crashes.

That could be a hardware or software problem. Eyetech can fix 1D4 and 2B A1200 circuit boards to correct marginal timing faults that might otherwise clobber fast accelerators. Some motherboards with these versions are already fixed, like the 1A, 1B and 1D1 boards, but thousands are not. The problem ones are late Commodore units, like your 1D4, and French-made Escom machines – with the Amiga rather than Commodore badge at the top left of the keyboard.

Eyetech charge less if your board has already been 'fixed', but the check still costs money, so it's worth considering other possibilities. It may be that your power supply is running at or beyond its limit – A1200s and their supplies do not leave much margin for expansion, and 040 accelerators are the greediest 68K types. Try removing the RAM, or using a different SIMM, in case that's the marginal part. It does sound as if your machine is failing to keep up sometimes, but this sort of erratic behaviour may be dependent on power, temperature or connectors as well as the obvious components.

Finally, not all programs run on 68040s. Some – mostly games – modify their own code but don't call the system cache control routines, which are in all Amiga ROMs since Kickstart 2. The caches in a 68020 and 68030 are so puny that this might not matter, but it's essential on a 68040, 68060 or PPC. You can turn off the caches with the command CPU NOCACHE. If this doesn't work, boot from floppy rather than HD – this invokes Commodore bodges that boost compatibility with dim programs, and avoids mutually incompatible 'improvements' in your startup. Failing that, there's a jumper on the Apollo 1240 that disables all the add-on board features…

NOISY WORKBENCH

Is there a program for Workbench 3.0 that will attach sounds to icons when you open them?

Mark Locandro

You can change the default blink and beep with the Workbench Sound preference, but to add several sounds you need extra software. There are several programs that attach sounds to Workbench actions. Maxxon Magic is one such, published commercially; Noisesome is freeware which announces mouse buttons, key-presses and disk changes.

The generic way to add sound to a particular icon is to replace the original icon with one that uses IconX to run a script. This can call Play16 or some such utility, before starting the original program with a second command. You can extend this idea to do anything – switch display modes, disable drives or toggle CPU features – besides noise-making.

Let's say you've got a program called OW with a tool icon, OW.info. To make the file OW.8SVX play every time you start the program from Workbench, use IconEdit to create a project icon called, for the sake of argument, OW2.info. You need to change the type from Tool - where the .info file has the same name as the program - to Project, where the program can have any name, depending on the icon configuration.

Select INFO for that icon, and change the Tooltype to C:ICONX. This runs the script with the corresponding name, but without the .info suffix, when you click on the icon. Now put PLAY16 OW.8SVX on the first line of a new text file OW2, and OW, to run the original tool, on the next line. You'll need a text editor like ED, Notepad or Emacs to create the file. Click on the OW2 icon to play the sound then run the program. Voila!

HP 420C DRIVER

Hi, could you tell me where I can get a driver to run a Hewlett Packard 420c on an Amiga 500+? I have spoken to HP but they only provide Windows drivers.

Vic Edgson
via email

MOUSE HICCUPS

I'm having some trouble when trying to move icons around the Workbench screen and moving opened windows. When moving icons I try to drag them but the pointer freezes and the icon reverts back to its old position. When moving or resizing windows it becomes very jumpy instead of a smooth movement.

Alan Kingsman
Suffolk

You need a new mouse, or might need to clean the old one, though it sounds as if you've got a switch broken. Clean it, or get a replacement mouse, and try that. Check the cable, plug and socket before you bin the old one. If the new mouse is just as bad, and works fine on another Amiga, there may be a fault on Paula or the CIA-A chips. These can be swapped for testing on an eighties Amiga or A3000, but A600 and AGA systems have surface-mounted chips, which require specialist repair or replacement.

You should clean your mouse regularly so it doesn't get clogged up with dirt.

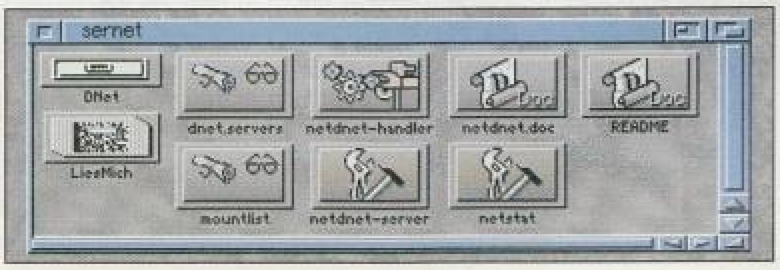
I'd try Peter Hutchinson's DJ400 driver, or other DeskJet options. Most DeskJets support a superset of the DeskJet 500 or 500C commands, but watch out for ones that don't support the HP PCL command set, and are hard-wired for Windows. Turboprint publishers warn the DeskJet are 710, 720 and 820. These don't even work with WinUAE, although Cloanto are toying with my idea that they should include a Workbench driver for the Windows API… Basically, don't buy printers from firms that don't support Amigas. There are still plenty that do.

NETWORKING

I have an A1200 and an A600 and I want to network them. I have built the serial link cable and connected the two machines. I have been able to play *Uropa2's* hover war game and that worked fine, I've also run *Term* on both machines and been able to talk to my sister in the other room and send files back and forth but I want to use the *SerNet* software.

When I installed it, the network icons appeared on both machines so I thought I had it working until I accessed the drive on the other Amiga and it crashed. I discovered that *SerNet* needs another program called *DNet*. In *AF103* in the Amiga.net section Dave Cusick did a feature on these sorts of network, he said he found *SerNet* but then discovered he needed "Matt Dillon's ageing DNet software". After reading that I then searched every CD and disk I have but the only things I could find relating to *DNet* were a few ARexx scripts which was of no help. As I am not on the Internet, I can't get hold of *DNet*. I need to use a serial network, I have tried *ProNet* but I don't like it and my parallel port is used by a printer so I can't use *ParNet*. Any ideas?

Robert Pearson
Hull



Get your Amigas talking to each other with ProNet and SerNet.

DNet was written many moons ago, primarily to link Amigas and SUN Unix workstations. I've put the distribution and sources files on the AFCD, in the Workbench/DNET drawer. I'm surprised you don't like ProNet – it's the only networking solution still being actively developed for new I/O cards, apart from fast Ethernet drivers, and it works pretty well. There is also a ParNet-compatible driver for bsc Multiface cards.

Given the limited expansion ports on your systems, I'd use ParNet between the motherboard ports and print through a IOBlix or Hypercom parallel interface on the clock port. That would be a lot faster than a serial link between two Paula chips, though some networked games only work with the simplest serial link. If you're really eager for speed, you could use a couple of PCMCIA Ethernet cards and run TCP/IP and CNET.DEVICE on both machines, for a transfers at hundreds of K per second.

Simon Goodwin

GOT A QUERY?

Make sure you submit them correctly:

- **Send email to amformat@futurenet.co.uk with the subject "Workbench".**
- **Send letters to the usual *AF* address and make sure you put "Workbench" on the envelope.**
- **Include details about your machine, such as what processor and how much RAM it has.**
- **Do your best to describe your problem succinctly.**
- **Make sure it wouldn't be easier to contact the dealer you bought the item from and ask them.**
- **Be concise!**

Creative

The complete beginners guide to... the Shell

On the CD -In_the_Mag-/Shell

Are you dazzled by DOS and confounded by the command line? Take heart with this tutorial

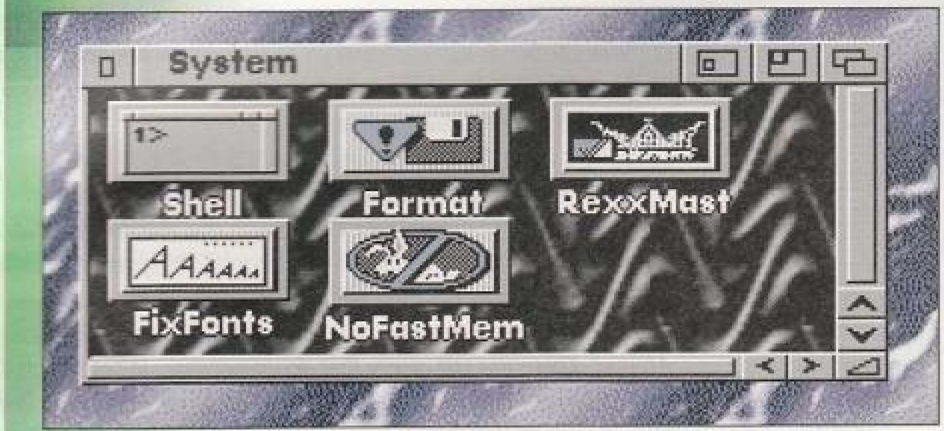
Our never-ending quest here at *Amiga Format*, to empower our reader into getting the most out of their machines, continued last time with an introduction to Workbench. We follow that up this issue with an introduction to the shell, a much under-valued weapon in the Amiga's arsenal.

The word 'shell' strikes fear into the hearts of novices, but this need not be the case. It's not difficult to learn and once learned can open up new avenues of power and flexibility in your daily Amiga use. So, shell-phobics everywhere, relax, read our tutorial and don't be afraid to experiment.

Remember to write in if there is some area of Amiga use that you want to see given the Beginners Guide treatment.

Richard Drummond

Often when I reply to readers' queries that the easiest way to solve some problem is via the shell, they give a startled gasp as if I had just announced I was Aleister Crowley. But no black magic is required to use the shell, no strange or arcane rituals. It is simply a text-based way of controlling your Amiga that is frequently more direct and more powerful than doing things graphically.



Launching the Shell icon in your Workbench's System drawer is the easiest way to open a shell window.

The shell gets its name from the fact that it acts as a shell or wrapper around AmigaDOS, the part of the Amiga's operating system responsible for managing files and processes. Like the Workbench, it is just a program you run on your machine the same as any other. And, like the Workbench desktop, if you don't like the standard one, you can use an alternative.

The shell's purpose is to run programs. Some of these programs might perform tasks like copying, renaming or deleting files, but they are just programs. Another name for the shell is the CLI or Command Line Interface and this describes precisely what it does. It interprets lines of text – commands – fed to it and runs the corresponding programs.

PRISING OPEN A SHELL

How, then, do you communicate with the shell, send it commands to run? Well, there are several ways. The usual method is via an interactive window called a shell window.

A shell window makes use of the Amiga's console device. This emulates a classic ANSI terminal. Commands are entered a line at a time via the keyboard and can be edited with certain key combinations (see box). A command line is accepted for processing when the Return key is hit. Any responses are displayed in the same window.

Another way to run shell commands is via the Execute Command option in the Workbench menu. This allows a single command line to be entered in a string gadget. If the command prints any output, Workbench will open a console window to display this.

The AmigaDOS command NewShell starts a new shell session in a new console window. You run this command via the Execute Command function described above, but the easiest way of opening a shell window is with the Workbench icon.

BEING ARGUMENTATIVE

The syntax of all standard shell commands and many other programs follows a standard format and is described by an argument template. You can make a command display its template by entering the command with a single question mark as a parameter.

A template is a comma-separated list of all the argument names. Each name can be followed by one or more modifiers specifying the type of that argument. Modifiers always begin with a slash and can be one of the following:

/S: SWITCH. This argument corresponds to an on-off value. If specified it will be turned on, otherwise it is off.

/K: KEYWORD. This argument must be preceded by the keyword name. For example, if the template is "Name/K", then unless "Name=<string>" or "Name <string>" appears in the command line, Name will not be used.

/N: NUMBER. This argument is a decimal number.

/T: TOGGLE. This is like a switch, but specifying this argument will causes the value to "toggle".

/A: REQUIRED. This argument must be specified or the command will fail.

/F: REST OF LINE. The remainder of the line is taken as the value of this argument.

/M: MULTIPLE STRINGS. This means the argument will take any number of strings.

TOP TIP

The shell can be made a much more pleasant environment by replacing the standard console device with KingCON. This provides new editing controls, filename completion and drag'n'drop from the Workbench. It is supplied on our coverdisc every issue in the +System+/Tools drawer.

CREATIVE INDEX

54 Beginners Guide
Richard Drummond leads you gently into the world of command-line interfaces.

58 Practical JavaScript
Improve your website's visual appeal with Rollover images. Neil Bothwick shows you how.

60 Useful ARexx
Nick Veitch takes the grind out of web authoring by getting ARexx to do the work.

62 Program Perfection
Richard Drummond goes into GUI-building mode and starts assembling an interface.

64 Synth Studies
Tony Horgan expands OctaMED SoundStudio's abilities with some handy plug-ins.

66 Banging the Metal
Sprites, those all-purpose graphical overlays, come under Simon Goodwin's scrutiny.

68 Amiga.net
Nothing on the box? Then take a look at webcams with Dave Cusick's guide.

SHELL OPTIONS

The command NewShell and the Workbench Shell icon understand similar parameters. For the icon, these can be specified by modifying its Tool Types with Workbench's icon information window. The first option is WINDOW and describes the size and style of the console window that the shell opens and has the format

```
CON:<left>/<top>/<width>/<height>/<title>/<options>
```

`CON:` **refers to the fact that it uses the console device.**
`<left>` **and** `<top>` **specify the position of the window**
`<width>` **and** `<height>` **its size**
`<title>` **the message that is displayed in its title.**
`<options>` **can be any of a number of options, the only one of use for shell windows being CLOSE which adds a close gadget to the window.**

The FROM parameter specifies a script file that the shell executes on opening and usually performs some kind of initialisation.

TOP TIP

Pipe handling of the standard shell can be improved with the Pipe command. This is not supplied with Workbench by default, but can be found on this issue's coverdisc.

Open the System drawer on your Workbench disk and double-click on the icon called Shell. A new window will open, displaying a message something like

```
New shell process 15
15.Workbench3.1:>
```

and a solid cursor. The right angle bracket and the cursor means that the shell is waiting for you to enter a command. The '15.Workbench3.1:' is known as the prompt and gets printed every time the shell wants input. The number 15 here refers to the current shell's process number – although you will probably have a different number. The Amiga is a multitasking computer, so you can open as many shell windows as you like. A new shell process gets assigned an unused process number.

The 'Workbench3.1:' in the prompt denotes the current directory, in this case the system disk. Every shell (in fact every process) running on your Amiga has its own current directory. This is the place in your Amiga's file system that is being focused upon by that shell. Files in the current directory can be addressed without specifying a full path to the file. For example, suppose there is a directory on your RAM disk called 'documents' and a file there called 'work.txt'. Normally to access this file you would have to specify a full path, that is, 'RAM:documents/work.txt'. (Note that a full path must begin with a volume name: here it is 'RAM:'. Volumes are always signified by a colon being appended to the volume's name. The forward slash is used to separate a directory name from the contents of that directory, whether it is a file or a further directory.) You can make the directory 'RAM:documents' the current one with the command 'CD' by entering:

```
CD RAM:documents
```

and pressing return. If this directory actually exists, the prompt would change to

```
15.Ram Disk:documents>
```

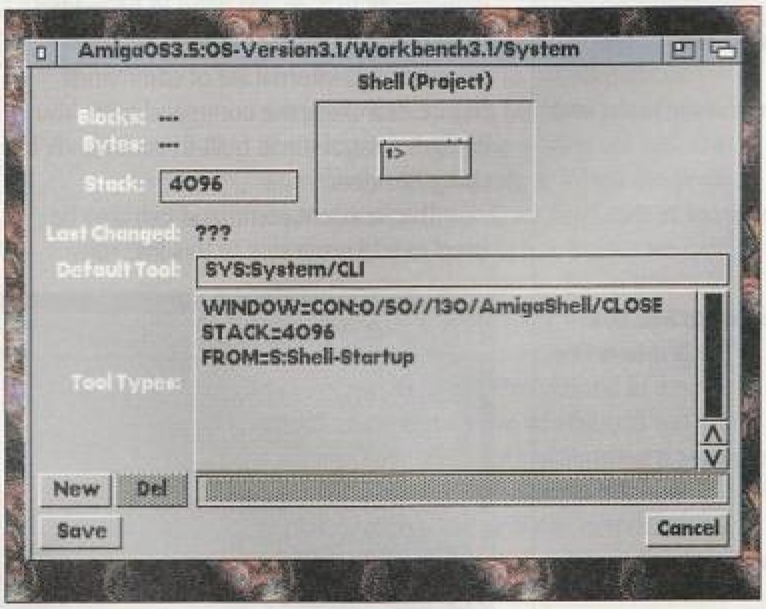
to reflect this. The file 'work.txt' could then be accessed just by its filename alone. You can also perform a CD command implicitly by just entering the directory or volume name alone. So, typing just

```
RAM:documents
```

would have the same effect.

> *The Amiga is a multitasking computer so you can open as many shell windows as you like; each one will be assigned an unused process number*

The Shell icon's Tool Types provide a means of altering the size of the default shell window.



AmigaOS3.5:OS-Version3.1/Workbench3.1/System

Blocks: ---
Bytes: ---
Stack: 4096
Last Changed: ???
Default Tool: SYS:System/CLI
Tool Types:
WINDOW=CON:0/50//130/AmigaShell/CLOSE
STACK=4096
FROM=S:Shell-Startup

TAKE COMMAND

Perhaps the most useful shell command is 'List'. Its purpose is to print the contents of a directory. If you simply enter

```
List
```

in a shell and press return, the contents of the current directory will be printed in the window. You can view other directories by specifying the name of the directory after the command name itself. For example

```
List SYS:Tools/Commodities
```

will show what's in the commodities drawer or your Workbench disk. The 'SYS:Tools/Commodities' part of the above line is known as an argument or parameter and this is the general format for all shell commands. If you wish to specify arguments for a particular command then these are entered following the command name: an argument is separated from the command name and arguments from other arguments by a space. If a file or directory name contains a space then that name must be supplied in double quotes:

```
List "Ram Disk:"
```

There is an important point to clear up here before we go any further. In the above command we accessed the RAM disk with the path "Ram Disk:", while earlier on we used just RAM:. They both actually refer to the same object. This is because every volume has both a device name and a label identifying it. For instance, the name of the device controlling the first floppy drive connected to your Amiga is called DF0:; the label depends on the name of the disk that is inserted in that drive. Similarly, the device which controls the RAM disk is called RAM:; its label is "RAM Disk" by default.

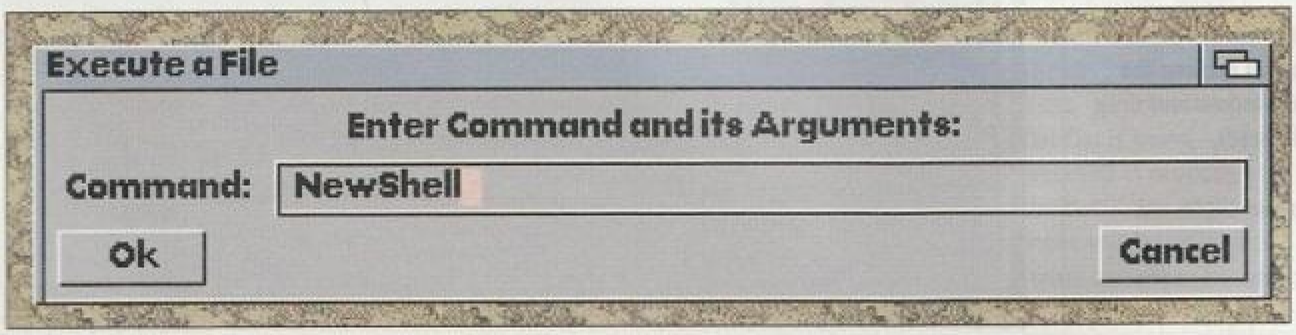
The parameters that a command understands is dependent on the command itself and they do not always have to be file paths. A parameter that modifies the behaviour of a command is known as a switch. For example, normally the List command displays information on the type or size and modification date for each object in a directory, but if the switch QUICK is specified it displays only object names. For example:

```
List SYS:Tools/Commodities QUICK
```

In most cases it does not matter in what order the switches occur in. Entering '`List QUICK SYS:Tools/Commodities`' would work just as well.

There are many more shell commands than we have space to discuss here, but the commonly used commands are largely self-explanatory. Copy copies files or directories, Delete removes them, Rename changes their names. Any command can be made to display its syntax (see Being argumentative).

Continued overleaf ➡



Command: NewShell

For quick, one-line shell commands, you can use the Workbench Execute Command function.

FOLLOW THE PATH

Previously, I said that the shell just runs programs. So when you enter the command 'List' in a shell, it executes a program called 'List'. How then does the shell know where to find that program?

As well as having a current directory, every shell has what is known as a command path. This is a list of places on your Amiga's filesystem that the shell will look for commands. You can show this list with the Path command.

Keyboard controls

The standard console device provides a rich set of editing facilities for manipulating the input line.

ANY "PRINTABLE" CHARACTER: Inserts the character at the current cursor position and moves the cursor and any characters to the right of it one place to the right.

BACKSPACE: Deletes the character to the left of the cursor and shifts the cursor and the rest of the line one place to the left.

DELETE: Deletes the character under the cursor and moves all the characters to the right of the cursor one place to the left.

CONTROL-U: Deletes all the characters on the input line to the left of the cursor.

CONTROL-K: Deletes all characters from the the current cursor position to the end of the input line and puts them in the yank buffer (not the same as the system clipboard).

CONTROL-Y: Inserts the contents of the yank buffer at the current cursor position.

CONTROL-W: Deletes characters to the left of the cursor position up to the start of the word that the cursor is over.

CONTROL-B OR CONTROL-X: Deletes the entire input line.

RIGHT ARROW: Moves the cursor one position to the right.

LEFT ARROW: Moves the cursor one position to the left.

SHIFT-RIGHT ARROW OR CONTROL-Z: Moves the cursor to the end of the line.

SHIFT-LEFT ARROW OR CONTROL-A: Moves the cursor to the beginning of the line.

RETURN OR CONTROL-M: Terminates the current input line and adds it to the history buffer if it is not identical to the previous line in the buffer.

UP ARROW: Deletes the current input line and replaces it with contents of the previous line in the history buffer.

DOWN ARROW: Deletes the current input line and replaces it with contents of the next line in the history buffer.

LEFT MOUSE BUTTON: If you left-click somewhere on the input line, the cursor will move to that position when you release the button. If you left-click anywhere in the console window and drag with the mouse then text will be selected (highlighted).

RIGHT AMIGA-C: Copies selected text to the system clipboard.

RIGHT AMIGA-V: Inserts text from the system clipboard at the current cursor position.

The entries in this list are displayed in the order in which they get searched. The command path is set up when your machine boots up and depends how your system is configured, but it will always contain at least two entries. The first is always the current directory and the last is always 'C:'. This last looks like the name of a disk, but is actually what is known as a logical device or an assign.

> **The standard shell has a number of commands that are built in, commands that do not need to be loaded from disk; CD is one of them**

An assign is a kind of place holder or shorthand for a file path. Instead of having to specify a long file path, you can use the short logical device name instead. Various assigns are set up by default and one of these is C:. This typically points to a directory on your boot disk called C, the place where shell commands are usually stored.

So when you enter the command 'List', the shell searches in the current directory for a program called 'List'. If it's not there, it goes through every other directory specified in the command path and looks in each one. If it doesn't find it in any of these it checks in 'C:'. On successfully finding the program, it loads and executes it and passes any parameters you may have supplied. You can convince yourself of the existence of the program List by viewing the contents of the C: directory.

If you did look at the C: directory, then you will notice there is no file called 'CD'. What happens when you use this command? Well, the standard shell has a number of commands that are built in, commands that do not need to be loaded from disk; CD is one of them. A shell searches this internal list of commands before searching the command path. You can get a list of these built-in commands by using Resident.

The Resident command can also be used to add programs to this list. For example, if you type:

```
Resident C:List
```

then the program List will be loaded and stored permanently in memory. The next time you use the List command, it will not need to be loaded from disk. Only certain types of a command can be made resident in this way, so-called re-entrant programs. This includes the majority of the standard shell commands. Other programs can be forced to be made resident by supplying the Resident command with the switch FORCE, but this is not a good idea unless you know what you are doing.

TOP TIP

The history function of the standard console device can be made more UNIX-like with the History command supplied on the coverdisc. This allows you to display the contents of the history buffer and re-execute entries by number.

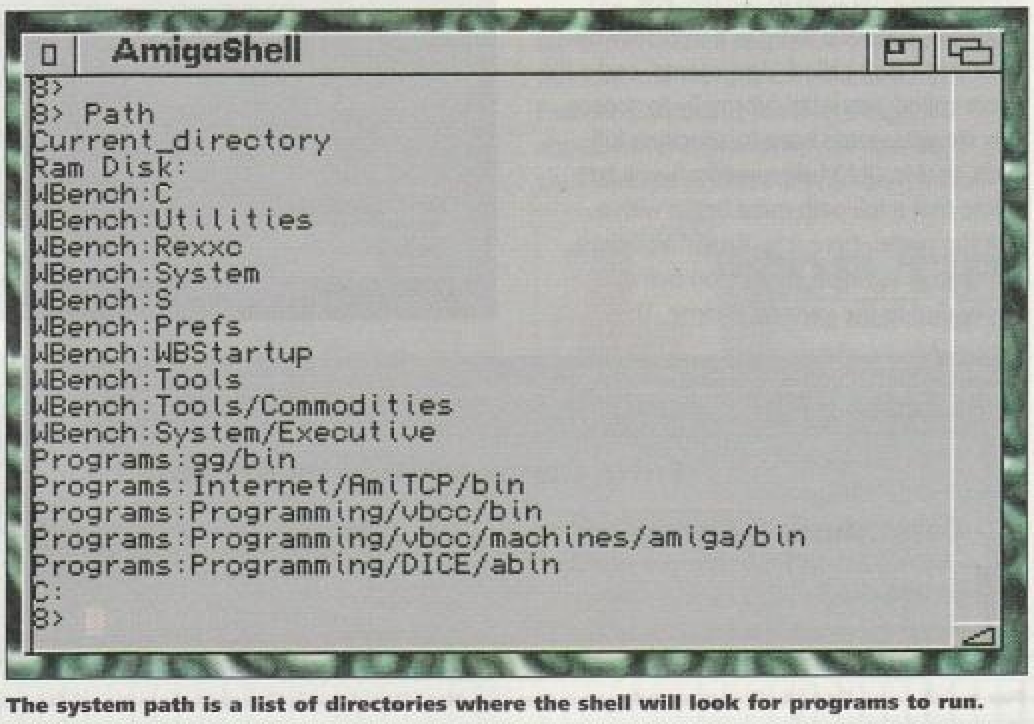
STREAMS

All processes that run on your Amiga have an input and an output stream – devices or files where that process reads data from and writes any results to by default. When you call a program from a shell window, these streams will be that same console window, that is, input comes from the keyboard and output gets displayed in the window. If a program uses these default streams, you can force it to use a file or device instead. This is called redirection.

The right angle-bracket is used to redirect the output of a command, the left angle-bracket the input. For example:

```
List RAM: >listing
```

would list the contents of the RAM disk to a file in the current directory called 'listing' overwriting any previous file of that name.



```
8>
8> Path
Current_directory
Ram Disk:
WBench:C
WBench:Utilities
WBench:Rexxc
WBench:System
WBench:S
WBench:Prefs
WBench:WBStartup
WBench:Tools
WBench:Tools/Commodities
WBench:System/Executive
Programs:gg/bin
Programs:Internet/AmiTCP/bin
Programs:Programming/vbcc/bin
Programs:Programming/vbcc/machines/amiga/bin
Programs:Programming/DICE/abin
C:
8>
```

The system path is a list of directories where the shell will look for programs to run.

TOP TIP

It is useful to be able to open a shell window quickly. With a hotkey commodity, such as MCX or MCP, you can set up the NewShell command to be executed when your preferred key combination is pressed.

(You can append to an existing file by using a double bracket '>>'.) This file could then be viewed by:

```
Type listing
```

or it could even be printed with:

```
Type listing >PRT:
```

Not many shell commands actually use the default input stream, so in most cases this is not particularly useful. It is, however, possible to connect the output of one program to the input of another with a special device called PIPE:. This allows one command to work directly with the output of another without having to store intermediary results in a temporary file.

For example, suppose you wish to view the contents of a directory which is too long to fit on the screen. You can pipe the output of the List command to the standard text viewer, More, and view the contents at your leisure. Enter:

```
Run List C: >PIPE:
```

and then

```
More PIPE:
```

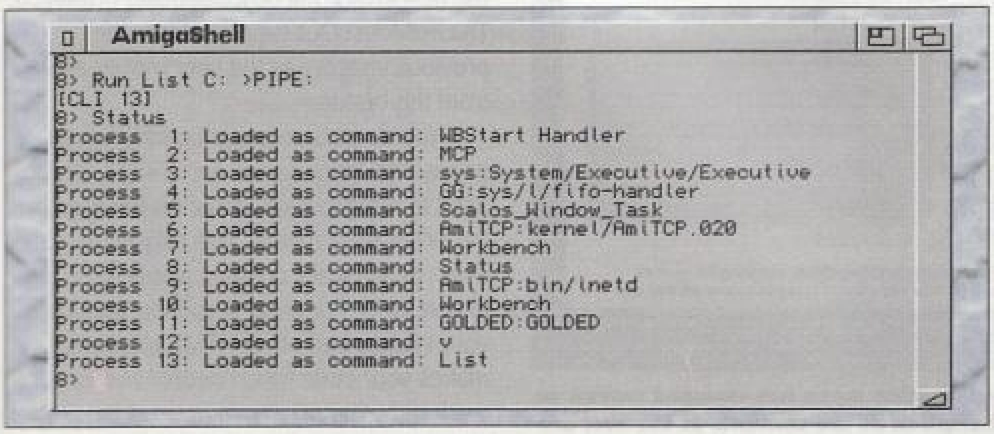
Or you could produce an alphabetically sorted list of a directory's contents with the commands

```
Run List SYS:WBStartup NOHEAD
>PIPE:
```

and then

```
Sort PIPE: *
```

The Sort command takes the names of an input file and an output file. The asterisk as an output file makes it print the output in the current console window.



```
8>
8> Run List C: >PIPE:
[CLI 13]
8> Status
Process  1: Loaded as command: WBStart Handler
Process  2: Loaded as command: MCP
Process  3: Loaded as command: sys:System/Executive/Executive
Process  4: Loaded as command: GG:sys/l/fifo-handler
Process  5: Loaded as command: Scalos_Window_Task
Process  6: Loaded as command: AmiTCP:kernel/AmiTCP.020
Process  7: Loaded as command: Workbench
Process  8: Loaded as command: Status
Process  9: Loaded as command: AmiTCP:bin/inetd
Process 10: Loaded as command: Workbench
Process 11: Loaded as command: GOLDED:GOLDED
Process 12: Loaded as command: v
Process 13: Loaded as command: List
8>
```

The Status command will show a list of currently running shell processes.

PATTERN MATCHING

Most shell commands, when they expect a file path as an argument, can accept a file pattern instead. Instead of processing a single file, the command will process all files which match that pattern. The syntax for expressing patterns is complex to explain but quite easy to use. A pattern may contain the following elements:

?	Matches a single character.
#	Matches the following expression 0 or more times.
(ab|cd)	Matches any one of the items separated by '|'.
~	Negates the following expression.
[abc]	Character class: matches any of the characters in the class.
[~bc]	Character class: matches any of the characters not in the class.
a-z	Character range (only within character classes).

Example	Action
Delete #?	Delete all file in current directory
List SYS:~(#?.info)	List all file in SYS: not ending in ".info""
Copy dir/[a-cx]?? RAM:	Copy all files in dir with three letter names beginning with a, c or x to RAM:

MULTITASKING

I slipped in a new concept in the two pipe examples. This is the command Run. Run creates a new process in which to execute a program. It takes one argument: the rest of the line is assumed to be the command to run.

If the pipe's buffer becomes full, the program doing the writing will halt until somebody else empties it so it is necessary to use the Run command

It was necessary to use Run above because, if the pipe's buffer becomes full, the program doing the writing will halt until somebody else empties it. When the shell executes a command, we have to wait for that command to complete before we can enter any new commands. So, in this example, our shell window would freeze us out. When we execute a command with Run, however, since this is done in a new process, we don't have to wait and can carry on with our shell session.

The Run command prints the new process number in our shell window. For example, with the first pipe example, when I entered '`Run List C: >PIPE:`', it displays '`[CLI 8]`' denoting that List is being executed in process number 8.You can check this by using the Status command, which shows a list of all currently executing processes. In this case, one of the entries will be '`Process 8: Loaded as command: List`'. When the contents of the PIPE: have been emptied, this new process will terminate.

TOP TIP

You can use the shell's Alias function to cut down on the amount of typing required. It provides a simple string substitution mechanism.

Commands Run from a shell window share that window as their default input and output streams. This can cause problems. The new process might try to write to the window while we are entering a command, creating confusion. Also, we cannot close the window until all processes that are using it have terminated. A solution, if the program you intend to run doesn't require input and output from a console, is to redirect both streams to the NIL: device.

For instance, suppose you wished to format a floppy disk. The format command doesn't require any keyboard input, but it normally prints progress information to its output. By executing the command as:

```
Run >NIL: <NIL: Format DRIVE DF0:
NAME Empty
```

we stop it interfering with our shell window and can get on with our shell session while it formats the disk.

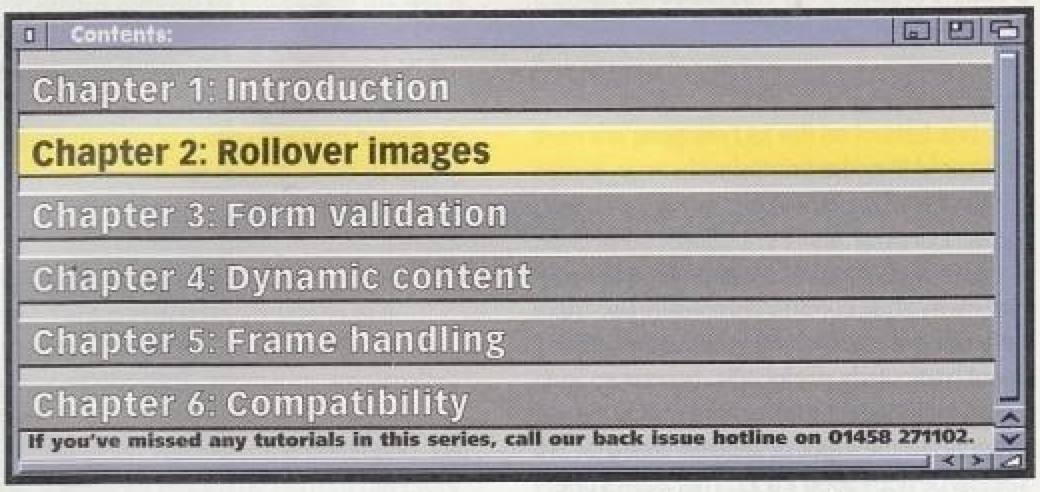
Richard Drummond

Practical JavaScript

Discover how to add informative visuals to your pages and begin luring users into your website

On the CD
-In_the_Mag-/JavaScript

For clarity, we've added the ¶ sign in the listings to show where you need to enter a Return.



Chapter 1: Introduction
Chapter 2: Rollover images
Chapter 3: Form validation
Chapter 4: Dynamic content
Chapter 5: Frame handling
Chapter 6: Compatibility

If you've missed any tutorials in this series, call our back issue hotline on 01458 271102.

One of the most popular uses of JavaScript is to provide greater visual feedback to users as they navigate web pages. The normal behaviour of a browser when you move the mouse over a link is to display the URL of that link in the status bar. While this may show the user where the link goes, it says little about what they'll find when they go there. A link like this one is much more informative:

```
<A HREF="links.html"
onMouseOver="window.status='See
the best collection of cool links
anywhere';return true"
onMouseOut="window.status='';retu
rn true">links page</A>¶
```

> **Changing the contents of the status bar to show a description of the page and using rollover images enhances the feedback given to users**

This introduces two new HTML attributes, onMouseOver and onMouseOut. These are known as event handlers (see the table for a full list). An event handler specifies an action to execute when a particular event occurs for that HTML object. In this case the actions are self-explanatory, they are called as the mouse moves over and away from the link. Each handler is executing two statements, separated by a semi-colon, the equivalent of a two line script. The first changes the contents of the status property of the window. This is the text displayed in the browser's status bar.

Instead of the bar displaying the complete URL of the link's page, it now shows a description of the page. The onMouseOut event clears the status bar, otherwise the text would stay there until the mouse was moved over another link. The final statement in any event handler should return a success code. In this case it's a simple "return true" statement, but later we'll see how a script can cause the browser to react differently depending on the result returned.

The entire event specification is enclosed in double quotes, which means we have to use single quotes for any quoted strings within it. Since the single quote character is also used for apostrophes, be careful of traps like:

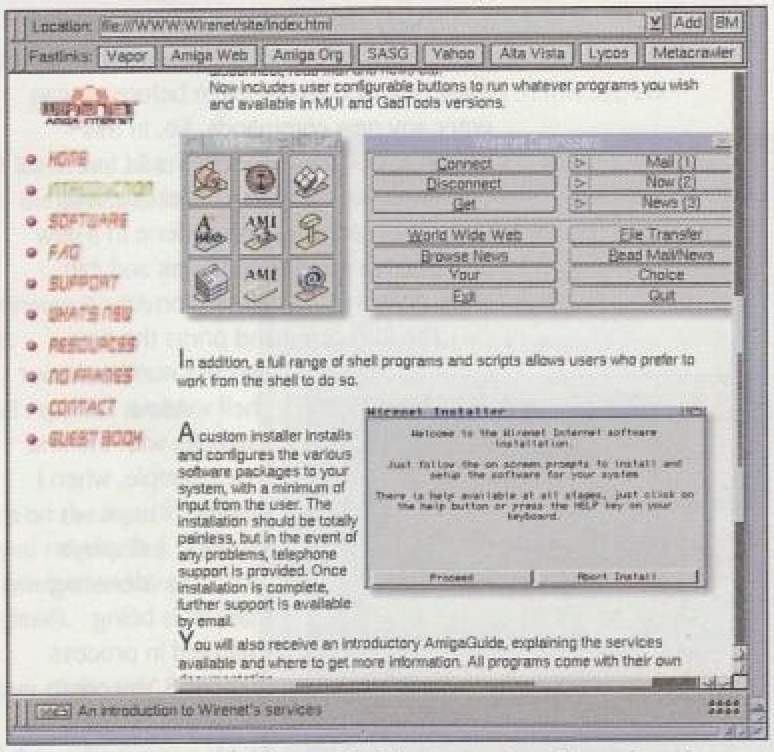
```
onMouseOver="window.status='The
World's best link page';return
true"¶
```

This will do strange things to a browser as it tries to interpret "s best link page" as part of the command. The solution is to "escape" the quote character with a backslash:

```
onMouseOver="window.status='The
World\'s best link page';return
true"¶
```

ROLLOVER IMAGES

Another way of enhancing the feedback given to a user is through rollover images. These use the onMouseOver event to replace a link's image with a different one and reload the original with onMouseOut. Here is a basic example:



Now includes user configurable buttons to run whatever programs you wish and available in MUI and GadTools versions.

In addition, a full range of shell programs and scripts allows users who prefer to work from the shell to do so.

A custom installer installs and configures the various software packages to your system, with a minimum of input from the user. The installation should be totally painless, but in the event of any problems, telephone support is provided. Once installation is complete, further support is available by email.

Welcome to the Wirenet Internet software installation.

Just follow the on screen prompts to install and setup the software for your system.

There is help available at all stages, just click on the help button or press the HELP key on your keyboard.

You will also receive an introductory AmigaGuide, explaining the services available and where to get more information. All programs come with their own

An introduction to Wirenet's services

The second button in the navigation menu has changed colour, as the mouse is over it. A description of the contents of the link are displayed in the status bar at the bottom of the window.

```
<A HREF="stuff.html"¶

onMouseOver="document.button.src=
'button1.gif';return true"¶

onMouseOut="document.button.src='
button0.gif';return true"¶
><IMG SRC="button0.gif"
NAME="button" WIDTH=...></A>¶
```

Since HTML regards spaces, line feeds and tabs as the same, we can split the tag over several lines to make it more readable. The browser treats it the same as if it were all on one line. Although we are working with an image here, the event handlers still belong to the link in the `<A>` tag. The `IMG` tag gives the object its unselected image. It also gives the object a name. The name is used by the onMouseOver event. This follows the hierarchical naming of JavaScript objects – the object is a part of the document, so it is referred to as `document.button`. The image's source is contained in the object's src property, referred to by `document.button.src`. If you change the contents of an image object's src property, the new image will be loaded and displayed. The onMouseOut event restores the previous imagery as the user moves away from the button.

You don't have to give each image a name. The array `document.image` can be used to refer to each image on the page, in the order they appear. This may be useful when dynamically creating pages (covered in part four). For most purposes, naming your images and other HTML elements makes your code much clearer and easier to work with. You may have noticed the phrase "loaded and displayed". The first time the

EVENT HANDLERS

JavaScript has several event handlers for various types of HTML object. Here is a list of them and the objects they work with.

HANDLER	OBJECTS	EXECUTED WHEN
onLoad	<BODY>, <IMG>	The file, HTML or image completes loading
onUnload	<BODY>	The file is unloaded, i.e. replaced by another
onMouseOver	<A>, <AREA>	The mouse moves over the object
onMouseOut	<A>, <AREA>	The mouse is moved away from the object
onClick	<A>, <AREA>, <INPUT>	The user clicks the mouse on the object (buttons, checkboxes and radio buttons)
onSubmit	<FORM>	The user clicks the Submit button of a form
onReset	<FORM>	The user clicks the Reset button of a form
onFocus	<BODY>, <INPUT>	The browser window containing this object becomes active
onBlur	<BODY>, <INPUT>	Focus is switched to a different window
onAbort	<IMG>	The user aborted the download of the image
onError	<IMG>	An error occurred when downloading the image (you may only use either onError or onAbort)
onChange	<INPUT> (Text, FileUpload and Select),	The content of a text input field is changed, or a change is made to the selection of an item in a SELECT object.

user moves the mouse over the button, the new image has to be downloaded. This won't seem a problem when you are testing the page on your hard disk, but once it's being accessed via a modem, the delay in loading will be significant. It's only a delay the first time, after then the image is in the browser's cache and will be loaded almost instantly. What we need is a way to preload the images into the browser's cache as soon as the page loads.

The onLoad event is perfect for this. Used as an attribute of the `<BODY>` tag, this event is executed as soon as the page has finished loading. We don't want to preload the images before then if the page has six buttons, that's 12 images to load, which will slow downloading of the page itself. It's best to wait until the page is loaded. This function can be included in the `<HEAD>` section of the page and called as follows

```
<script type="text/javascript"
language="javascript1.1">¶
<!– hide script from non-JavaScript browsers¶
// Preload button images¶
function PreloadImages()¶
{¶
        ImageNames = new
Array(‘home’,’aboutme’,’myamiga,’mydog’,’links’,’sof
tware’);¶
        ImagePath = ‘images/’;    // the path to the
images must end with a "/"¶
        StdExt = ‘0.gif’;¶
        SelExt = ‘1.gif’;¶
        TempImage  = new Image;¶
        for (var i = 0; i < ImageNames.length;i++)
{¶
                TempImage.src = ImagePath +
ImageNames[i] + StdExt;¶
                TempImage.src = ImagePath +
ImageNames[i] + SelExt;¶
        }¶
}¶
// –>¶
</script>¶
</head>¶
<body bgcolor="white" onLoad="PreloadImages();return
true">¶
```

This introduces a few new ideas, so we'll work through it. The first few lines declare the script and define the function `PreloadImages`. The first line of the function sets up an array containing the names of the images. This is more elegant than individually loading each image and makes adapting the script to handle more images a simple matter of adding their names to the array. The next three lines give the path to the images and the names of the standard and highlighted images. In this case, the convention is to call the standard image for the home button "`home0.gif`", the selected image "`home1.gif`" and so on. I won't state the obvious by telling you that both images should be the same size.

> Careful use of onMouseOver can make your pages more attractive and more informative – a site that visitors will want to return to

Next we define an image object, this won't actually be displayed, but setting its src property to the name of a file causes that file to be loaded, and thus stored in the browser cache.

We loop through the array using the "for" statement. The brackets contain three items, separated by semi-colons, to specify how the loop should behave. The syntax is similar to that used in C. The first item initialises an index variable and is executed once, before entering the loop. The second is a test; as long as this is true the loop is executed. `ImageNames.length` is a property of our array, returning the number of items in the array. JavaScript arrays are numbered from item 0, so with our array of six items, this is true for values of i up to 5, the last element in our array. The third element of the "for" statement is executed after each loop, to increment the index variable; "i++" is equivalent to "i = i + 1". The statements to be executed by the loop are in braces ({}).

The two lines between the braces do the actual work. When applied to strings, the + operator concatenates them. The first time around the loop, i is 0, `ImageNames[0]` is 'home' and the first line becomes

```
TempImage.src =
‘images/home0.gif’;¶
```

By assigning the image file to the src property of this image object, we force the browser to load it, even though it doesn't display it. This means the image is now in the browser's cache, immediately available the next time it's called for.

That's it. To use this script in your page, you only need to change the first three lines of the function. There is one important point to consider. You are making your visitors download all of the button images for your page at once. Don't use so many that you overload their connection, and share the same images between the various pages on your site. If you overuse this, you'll discourage people from coming back. Careful use of onMouseOver can make your pages more attractive and more informative. This is the type of site that visitors return to.

Finally, we can combine rollover images and status messages like this

```
<A HREF="stuff.html"¶
onMouseOver="window.status='Retur
n to home
page';document.button.src='button
1.gif';return true"¶
onMouseOut="window.status='';docu
ment.button.src='button0.gif';ret
urn true"¶
><IMG SRC="button0.gif"
NAME="button" WIDTH=...></A>¶
```

Neil Bothwick

AWeb - World of Amiga
Information
Latest News
About the show

This site also uses rollover images. Instead of changing the colour or design, the second image is offset by several pixels. The button appears to move as the mouse passes over it.

Useful ARexx

Find hand-coding a hassle? Then follow in the footsteps of the laziest Amiga owner on Earth, and get your computer to generate web pages for you

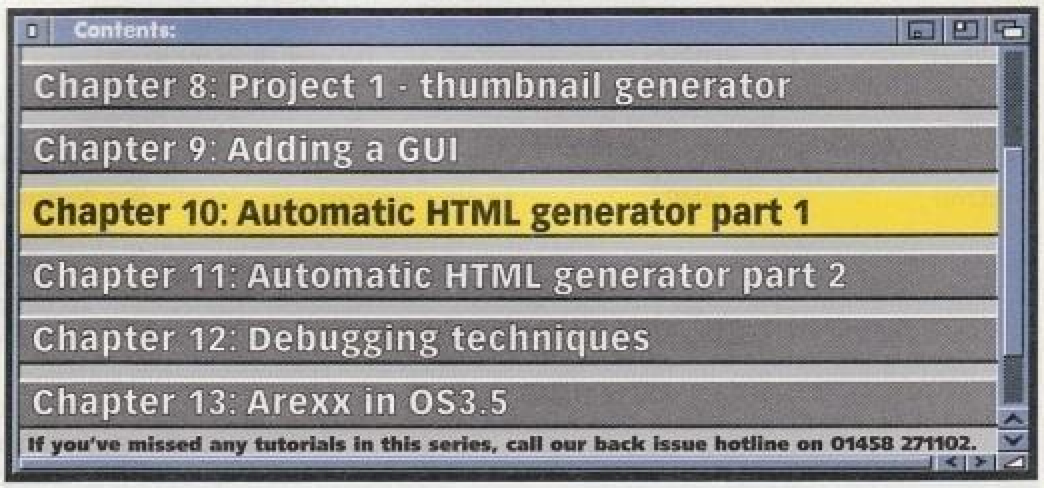
As you may remember from the tutorial last issue, I said that our next project was to begin building HTML pages. HTML coding is all well and good, and I'm sure loads of people really like typing in all the magic symbols and complicated tags. I'm not one of those people, and I'm sure many of you could do without hand-coding dozens of pages. I mean, come on, that's what we have computers for isn't it?

I really chose to do this project because I have a large collection of, er, comics. I'm always forgetting which ones I have, or which artist did what cover and so on (I won't bore you with the details). My idea was to make a nice interactive HTML based directory of all the front covers of all the comics I own. Aside from taking about three years to scan them all in, I reckon it would take me several weeks just to generate the HTML code for all the thumbnail galleries, so I decided to spend a few days writing a program to do it for me. ARexx is the natural choice, because it is so delightfully easy to deal with files and text strings, which is what HTML is all about after all.

The great thing about this project is that, even if you don't have a bad memory and a large comic collection, this sort of thing is useful for all sorts. What about a nice HTML interface for all your holiday pictures, or clipart or whatever?

Also, once you get the basic hang of it, you could adapt ARexx to update your web home pages for you. Anyway, for the purposes of my comic collection, I have a whole load of directories, full of images. With the excellent thumbnail generator we wrote in issue 128, I have created thumbnails for them. Now what we need is a script that will generate HTML pages to show them all, with links to the original.

I've thought about this for a while and have decided that my web pages will consist of three frames. The top banner space will display the name of the directory we are



Contents:

Chapter 8: Project 1 - thumbnail generator
Chapter 9: Adding a GUI
Chapter 10: Automatic HTML generator part 1
Chapter 11: Automatic HTML generator part 2
Chapter 12: Debugging techniques
Chapter 13: Arexx in OS3.5

If you've missed any tutorials in this series, call our back issue hotline on 01458 271102.

PLANNING

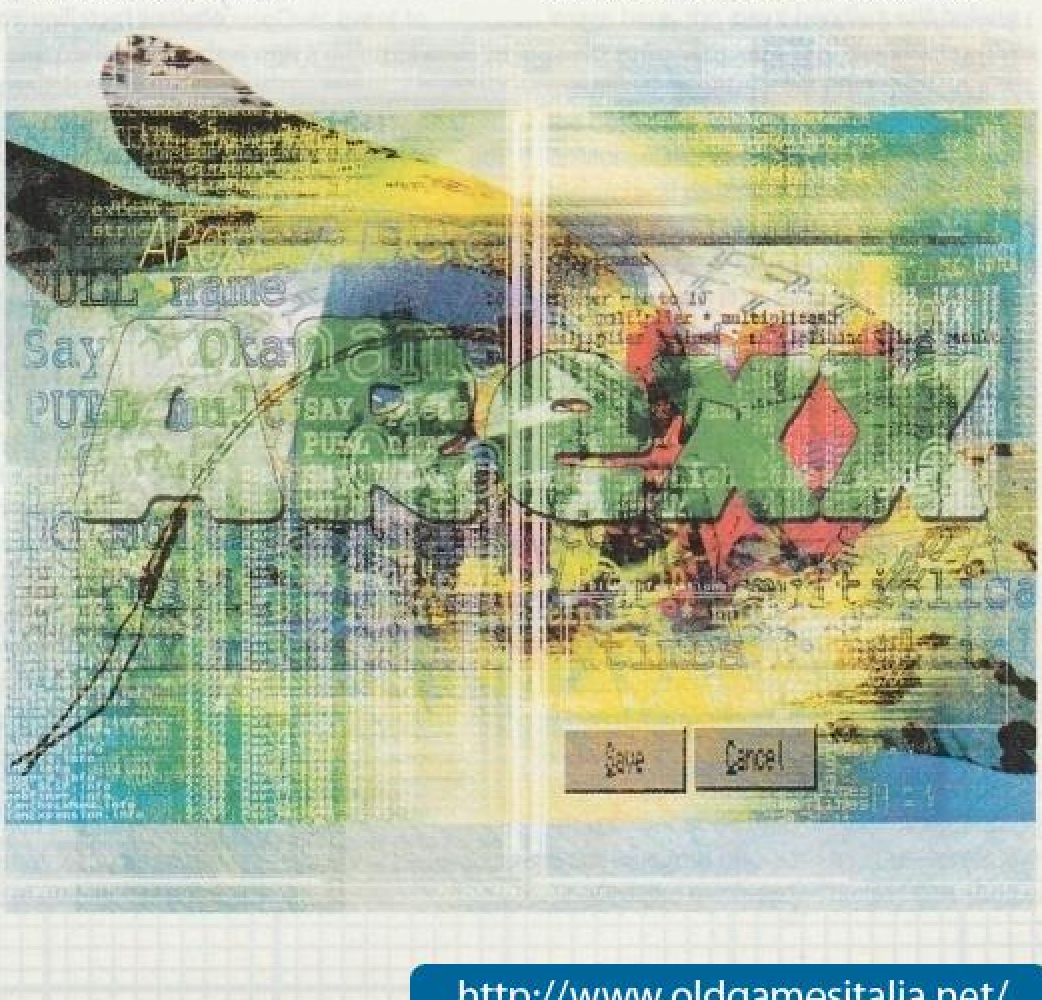
If you are getting more confident about writing ARexx scripts, you may not think it is necessary to plan out this latest project, but it is. The projects we have attempted up until now have been fairly simple, and pretty linear. This project is also fairly linear, but has several parts, which must be done in the right order if it is to work properly.

Now, don't worry, I'm not going to advocate anything so ridiculous as a flowchart or anything. That would be a little over the top, and often creates more confusion if you don't make them very detailed. But that doesn't mean we can't do a little bit of planning.

One useful thing I have found when writing ARexx programs is to actually plan out the comment lines first, in your normal programming word processor (*CED* is still my favourite for writing C code with, but *Turbotext* is really good for ARexx). You'll be surprised at how easy and useful this is. Just using comment lines, describe the processes involved in making the program. You'll probably find that when you start, you'll need to add extra things in between the steps you've already written, or move whole sections about. While everything still consists of comment lines, it is still pretty easy to do this.

Here is how my plan of this project looked when I started:

```
/* Automatic HTML pages */


/* read list of directories */

/* Assign directory names to stem variable */

/* create contents html */

/* start loop for each directory*/

    /* read files in directory */
    /* assign filenames to stem variable */
    /*disregard thumbnail files*/
    /* Calculate no of pages required */
    /*loop to create page */
          /*Loop for  rows */
                    /* Loop for columns */
                              /* Write HTML for
cell*/
                    /* end column loop */
          /* End Row loop */
    /* End page loop*/
    /* Write Banner.HTML*/

/* End loop */
```



currently in, the side panel will include a contents list of all the directories we have pages for and the main window will obviously show the thumbnails. The top banner will also have to provide links to any other pages I need to create. The easiest way to do this is to actually create two pages with two frames, because this lets you easily update the banner and thumbnail frames simultaneously. See Figure 1 (to the right) for more detail.

So, our program will have to generate a banner document and a thumbnail document for each directory. But hang on a minute, what if there are loads of images in a directory. The picture part of the page will take hours to load, and we'll have to scroll around to see anything. So, instead, we'll set a maximum size. Each page will contain a table, with five columns and four rows of images. Obviously you can change these values depending on the size of your thumbnails, or the size of your workbench screen. If there are more than 20, we'll have to create a second page. The banner can include links to all the pages to make navigation easier.

The important thing here is that we plan in advance. The boxout on planning will show you how I develop my more complicated ARexx scripts! But we also have to think about the planning of our web pages. In order to generate the right files in the right place, we need to know exactly where everything should go, and if you don't sketch it out on a piece of paper or something, you'll probably get very confused. I have included an example directory tree here (see the boxout on the right) to show you how things should work.

I'm sorry there wasn't really enough time/space to include all of the ARexx code we are going to use, but it is more important that you understand what is going to happen first. Perhaps you could think of ways to adapt the scripts we have made previously to do the job?

Anyway, in part two, next issue, we will have all the code you can handle. It should be on the CD, along with the HTML files, and if you are lucky, a sample of my comic collection! See you then.

Nick Veitch

If you don't sketch it out on a piece of paper or something to start with, you are likely to get very confused and make time-consuming errors!

EXAMPLE DIRECTORY TREE

This is an example of how your directory tree will look. In the root directory, `Index.HTML` is the main web page to open, but it doesn't contain much data, just the setup info for the frame. It calls `Side.HTML`, which we will generate from the directory names, and `Content.HTML`. `Content.HTML` merely divided this frame into two again, and uses `Banner.HTML` for the top half, and `Welcome.HTML` for the bottom half. These latter two files can contain anything you like – text, graphics, animated flaming logos. These are the bits that will actually change. Clicking on a link in the side frame will cause the right two frames to change. It will do this by opening `Index.HTML` in the respective directory and loading in the first page of thumbnails and the `Banner.HTML` file from there. The banner will contain links to further thumbnail files if there are any. In the example there are only three images and their associated thumbnails (prefixed with "TN_"), but if there were 25, there would be a `pics2.HTML` file too. It may seem a little overly complicated but it is actually pretty simple. It's made a bit more complicated by the roundabout way we get two frames to change at once, but hey – it works! I have provided the listings for `Index.HTML` and `Content.HTML` so you can see how the frames work. Feel free to adjust them to suit your needs, as they make little difference to the ARexx code.

```
Index.HTML
content.HTML
Side.HTML
Banner.HTML
Welcome.HTML
Aria(dir)
    Banner.HTML
    pics1.HTML
    cover1.jpg
    cover2.jpg
    cover3.jpg
    TN_cover1.jpg
    TN_cover2.jpg
    TN_cover3.jpg
```

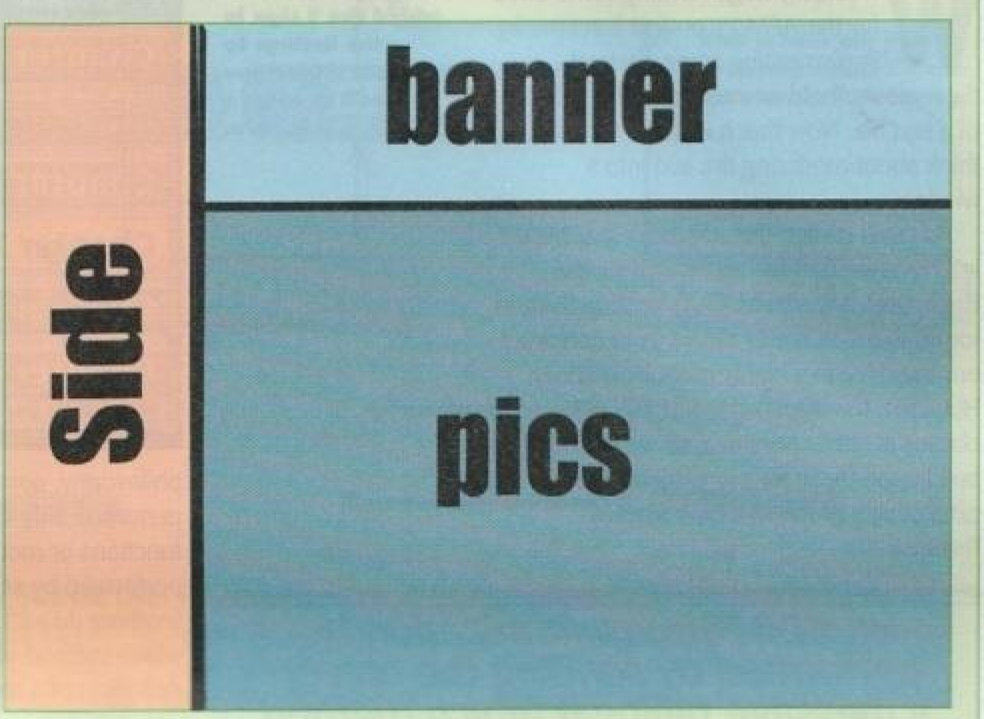


FIGURE 1
This just shows how the frames work to split the display into different parts.

HTML Listings

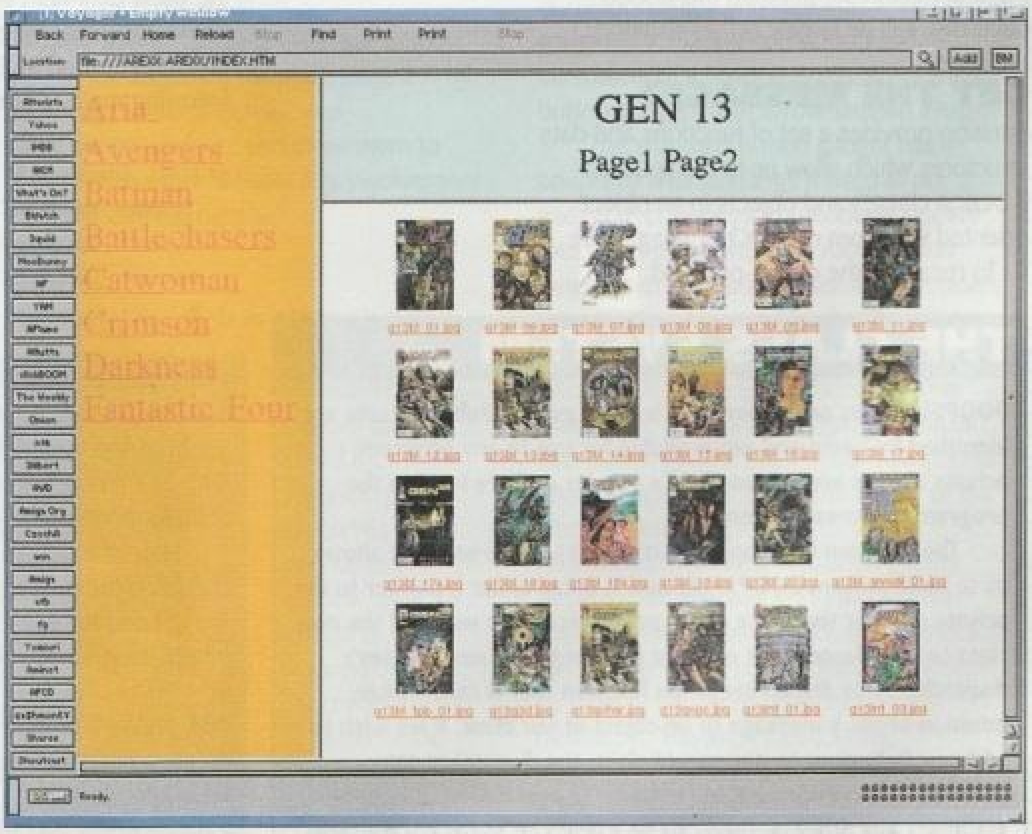
These are the two files which set up the frames. Frames are really handy for this sort of project, but you could achieve the same sort of functionality with tables. It would make the ARexx script a little more complicated though, as you'd have to add the index information to every single page!

INDEX.HTML

```
<html>
<frameset cols="100,*">
<frame src=side.HTML name="side">
<frame src=content.HTML name="content" >
</frameset>
</html>
```

CONTENT.HTML

```
<html>
<frameset rows="100,*">
<frame src=banner.HTML name="banner">
<frame src=welcome.HTML name="pics" >
</frameset>
</html>
```



GEN 13

Page1 Page2

Aria
Avengers
Batman
Battlechasers
Catwoman
Crimson
Darkness
Fantastic Four

This is what your finished web pages will look like. The colour scheme is a bit unpleasant isn't it, but I'll show you how to define all those nice touches when we look at the code next issue. At least you can see that it does actually work!

Program Perfection

On the CD
-In_the_Mag-/Program_Perfection

BOOPSI, GUI and more strange-sounding acronyms in this next part of our programming project

We actually began writing some code for the *AFMore* project last time by implementing some abstract datatypes to hold an internal representation of a text file. Now that it is done, we can think about rendering the text into a window.

As I said earlier, the *AFMore*'s graphical interface will be built with BOOPSI, the Basic Object Oriented Programming System for Intuition. BOOPSI allows us to construct our interface in a highly modular manner. However, the standard set of BOOPSI classes is rather primitive, so we will need to build upon these for our project; luckily, extensibility is one of BOOPSI's key features.

> *In BOOPSI, communication is performed by sending the object a message telling it which method you wish to invoke*

It should be noted that a complete guide to BOOPSI would fill the majority of this magazine, so I refer the reader to Chapter 12 of the Libraries Reference Manual. Hopefully, the source code and documentation supplied on this issue's coverdisc will be largely self-explanatory.

GET THE MESSAGE?

Intuition provides a set of functions and data structures which allow us to manipulate BOOPSI classes and objects in an object oriented way from non-OO languages like C. To recap on the object-oriented philosophy, communication with an object is permitted only via one of its member functions or methods. In BOOPSI this is performed by sending the object a message (nothing do with an Exec message), telling it which method you wish to invoke. The basic definition of a message is:

```
typedef struct {¶
    ULONG methodID;¶
} *Msg;¶
```

The item `methodID` informs the object which method is to be invoked. This message definition is rather like a virtual base class in C++. Real messages override the basic definition depending on the type of the corresponding method. For example, OM_NEW and OM_SET methods have the following method structure:

```
struct opSet {¶
  ULONG  MethodID;¶
  struct TagItem *ops_AttrList;¶
  struct GadgetInfo *ops_GInfo;¶
};¶
```

In the case of the OM_NEW method, `ops_AttrList` points to a list of initial attribute/value pairs for the object; for OM_SET it points to a list of attribute/value pairs to modify.

Now, the building block for all BOOPSI classes is the root class. Certain methods are defined for this root class and hence, by inheritance, for all other BOOPSI classes.

OM_NEW: This method tells a class to create a new instance of itself. A class receives this method when a client calls the `NewObject()` function on that class. The message contains a list of initial values for the new object's attributes.

OM_DISPOSE: This instructs an object to delete itself. A client sends this message by calling the `DisposeObject()` function.

OM_SET: This method tells an object to set one or more of its attributes and is invoked by a client with the `SetAttrs()` call. The object receives a message containing a list of attributes to modify and their new values.

OM_GET: This method informs an object to return the value of one of its attributes. A client sends this message by a `GetMethod()` call.

OM_UPDATE: This method tells an object to update one or more of its attributes. It is not called by the client of an object, but is used by BOOPSI objects to notify transitory changes to each other. The message structure is similar to OM_SET messages with the addition of a flag to discern between interim and final update messages.

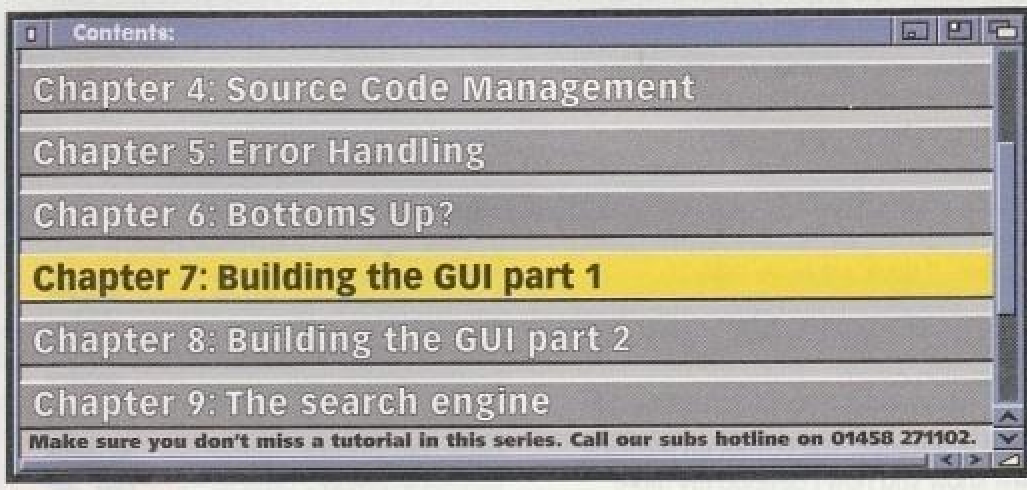
OM_NOTIFY: This method is again not used by a client but rather by an object to notify other objects about a change in the state of one or more of its attributes. A child object will generally not handle this method itself but pass the message to its parent.

Children of the root class may override any of these methods or define new methods. A client must use the `DoMethod()` call to invoke any of these new methods.

GADGETS AND GIZMOS

One descendant of the root class is the gadget class. This is where things begin to get interesting. The root class implements the mechanics of the BOOPSI system, but objects of root type don't do anything useful. Objects of gadget type, however, are

For clarity, we've added the ¶ sign in the listings to show where you need to enter a Return.


Contents:
Chapter 4: Source Code Management
Chapter 5: Error Handling
Chapter 6: Bottoms Up?
Chapter 7: Building the GUI part 1
Chapter 8: Building the GUI part 2
Chapter 9: The search engine
Make sure you don't miss a tutorial in this series. Call our subs hotline on 01458 271102.

THE CLASS SYSTEM

BOOPSI classes can either be private or public. Public classes are identified by name and are available for use to any program; private classes are accessed via a pointer and are local to the program that creates them.

The Intuition function `MakeClass()` is the one that allows us to build custom BOOPSI classes. It takes either a pointer to the private class or the name of the public class that we want the new class to be a descendent of and a pointer to our new classes's dispatcher. This dispatcher is the function that is called when Intuition sends a message to an object of our class. If we wish to add new behaviour to our parent class, the dispatcher can perform some processing in response to overridden or new methods. Any other method can be passed on to the parent class for handling.

DOES IT WORK?

Convincing yourself of the robustness of your GUI code is never an easy matter. The primary input of a GUI element is some input event from the user, the primary output some visual change to the element. Because of this interactive behaviour, GUI elements are difficult to test. When testing a BOOPSI class it is a good idea to log all invoked methods and attribute changes to a console or file. This log can then be examined to confirm that the class is responding correctly to messages and updating its state in the desired manner. The Amiga increases the problem because of the rich variety of display environments that a GUI object can live within. Don't assume everybody else's screenmode or font is the same as yours.

equivalent to traditional Intuition gadgets. They may be added to a window, be manipulated by the user and can communicate with each other and the client program.

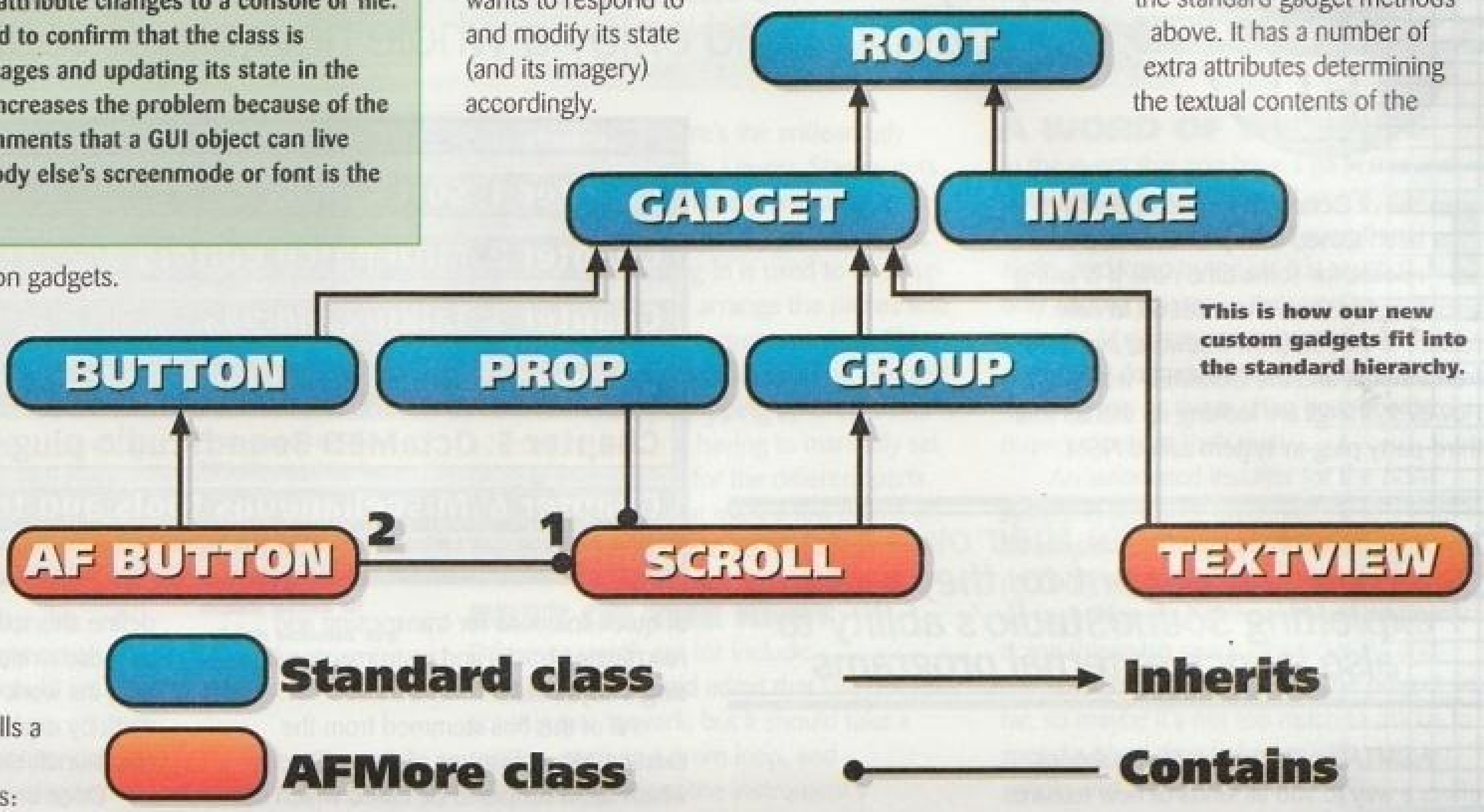
The basic gadget class has attributes which describe the physical position of a gadget within a window and defines a number of new methods.

GM_RENDER: This method tells a gadget to draw itself. It can be invoked by a number of causes: when a gadget is first added to a window, when the gadget's window is resized, when Intuition refreshes the window after layer damage or explicitly as a result of a `DoMethod()` call from a client.

GM_HITTEST: When a user mouse-clicks anywhere in a window, Intuition searches the list of gadgets attached to the window to see if any have been hit. If the click falls within a BOOPSI gadget's bounds, this method is called. If a custom gadget has a non-rectangular shape it can check the coordinates provided in the message to see if it really was hit.

GM_GOACTIVE: If a gadget responded to a hit test positively, Intuition will ask the gadget if it wants to be active by invoking this method. An active gadget is one that gets input from the user, for example, a selected string gadget or a proportional gadget when the user picks up its knob with the mouse. Some gadgets may not wish to become active, for example, a simple boolean gadget.

GM_HANDLEINPUT: Once a gadget is active, Intuition will send it input events: mouse-clicks, key presses, timer events, etc. The gadget can examine these events, decide which ones it wants to respond to and modify its state (and its imagery) accordingly.



This is how our new custom gadgets fit into the standard hierarchy.

GM_GOINACTIVE: This method tells a gadget that it is no longer the active gadget.

Perhaps the most interesting attribute defined for the gadget class is ICA_Target. This points to a gadget's target object. When a gadget receives a OM_NOTIFY message (signifying that some attribute has changed), it sends an OM_UPDATE message to this target. The target may be another gadget or list of gadgets (see the RKM on interconnection classes). It is also possible to specify an Intuition window as a target, which results in an IDCMP_IDCMPUPDATE message being sent to the window's message port. It is by these mechanisms that we can interconnect gadgets and allow them to update each other without any involvement from the client program.

DIY

The rendering of text in *AFMore's* main window is achieved by a custom gadget called the TextView gadget which fills the interior of the window. This gadget is responsible for the rendering of as much of the specified text as will fit within the current window size, adapts to changes in the window size and accepts commands to scroll the displayed text. For just now we will keep things simple, but later on we will also add selecting of text via the mouse (which can then be sent to the system clipboard) and searching of text.

The TextView gadget is a direct child of the gadget class and overrides all the standard gadget methods above. It has a number of extra attributes determining the textual contents of the gadget, the current display position, the font to be used for rendering the text and so on. It adds new methods to allow scrolling of the text. For example, calling the TVM_LineUp method will scroll the text page up one line. See the documentation on the coverdisc for more details.

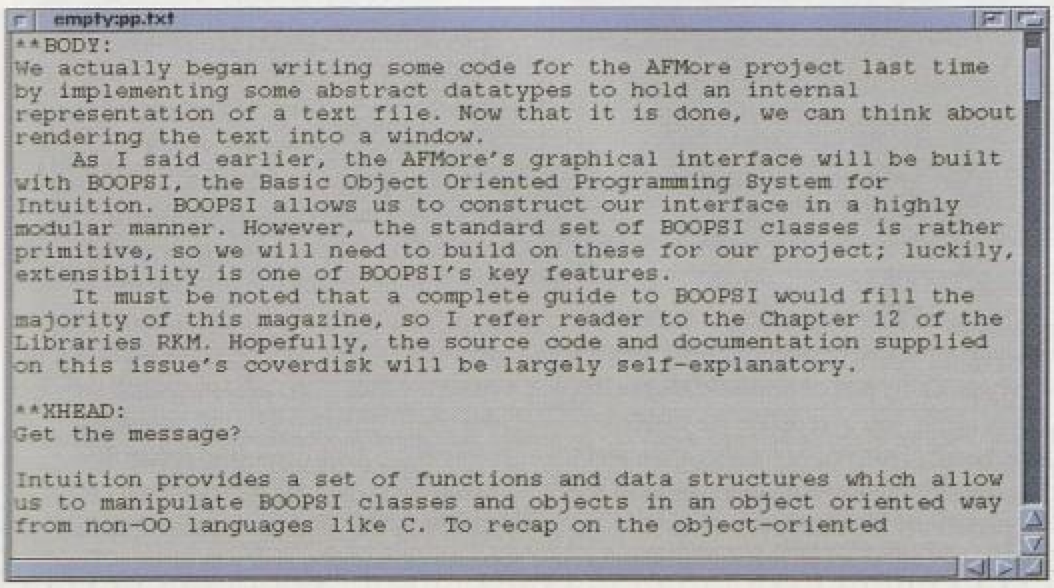
The other most prominent gadgets in *AFMore's* main window are the scroll gadgets in the right and bottom borders. These are interconnected with the TextView gadget so that manipulating either scroll gadget causes the displayed text to scroll correspondingly and vice-versa. The scroll gadget is actually a compound gadget consisting of a proportional gadget and two button gadgets with arrow-shaped images.

The standard button gadget has a couple of shortcomings if used in our scroll gadget. It continues to broadcast update messages even when the mouse is no longer over the gadget itself and it repeats broadcasting too quickly after its initial selection. When a user clicks the gadget once, multiple messages are sent. This makes fine control of the gadget difficult. The button gadget used in our compound scroll gadget inherits the behaviour of the standard button gadget and subtly redefines it. This new AFButton gadget becomes deselected when the mouse pointer is moved away and, when selected, will send an initial update message followed by a delay before repeatedly sending messages. The implementations, documentation and test code for the above three custom classes are on the coverdisc.

Next issue we tackle the window class.

Richard Drummond

This window demonstrates our new gadgets in action.

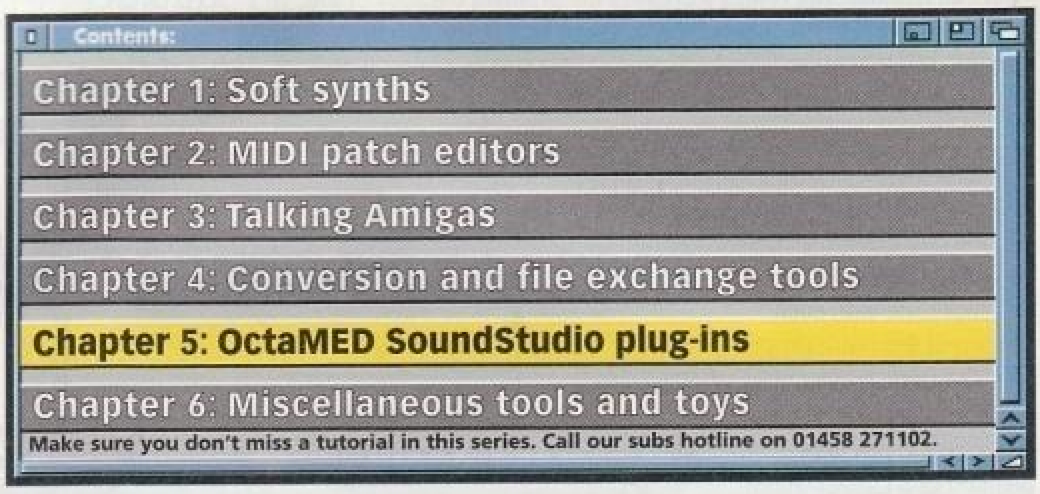


```
**BODY:
We actually began writing some code for the AFMore project last time
by implementing some abstract datatypes to hold an internal
representation of a text file. Now that it is done, we can think about
rendering the text into a window.
    As I said earlier, the AFMore's graphical interface will be built
with BOOPSI, the Basic Object Oriented Programming System for
Intuition. BOOPSI allows us to construct our interface in a highly
modular manner. However, the standard set of BOOPSI classes is rather
primitive, so we will need to build on these for our project; luckily,
extensibility is one of BOOPSI's key features.
    It must be noted that a complete guide to BOOPSI would fill the
majority of this magazine, so I refer reader to the Chapter 12 of the
Libraries RKM. Hopefully, the source code and documentation supplied
on this issue's coverdisk will be largely self-explanatory.

**XHEAD:
Get the message?

Intuition provides a set of functions and data structures which allow
us to manipulate BOOPSI classes and objects in an object oriented way
from non-OO languages like C. To recap on the object-oriented
```

Synth Studies

Amplify SoundStudio's capabilities with Note Sequence Manipulation and enjoy a whole new era of sound

On the CD
-In_the_Mag-/Synth_Studies


Contents:
Chapter 1: Soft synths
Chapter 2: MIDI patch editors
Chapter 3: Talking Amigas
Chapter 4: Conversion and file exchange tools
Chapter 5: OctaMED SoundStudio plug-ins
Chapter 6: Miscellaneous tools and toys
Make sure you don't miss a tutorial in this series. Call our subs hotline on 01458 271102.

Fans of OctaMED *SoundStudio* have been teased with promises of a v2.0 release for some time now. It is going ahead, but for now the most up to date release is v1.03c (now freeware, available from Aminet and the OctaMED website). However, things are looking up thanks to a third-party plug-in system called *NSM*.

> Anyone can write their own NSM plug-ins if they want to; they work by exploiting SoundStudio's ability to also launch external programs

NSM (*Note Sequence Manipulation*) offers a way to add all kinds of new features to *SoundStudio*, but it is a bit more complicated to use than its 'plug-in' tag would suggest. However, it does mean that you can bolster your basic *SoundStudio* with additions such as powerful sample filtering (including resonant filtering), improved echo algorithms, text annotations for all tracks, better MIDI control and plenty of quick solutions for transposing and rearranging tracks and instruments with a single keystroke.

Q+A

Q I'm still using *OctaMED 4*, mainly because I can get around it more quickly than in later versions. I don't really want to change. Can I still use *NSM*?

A No. You must have what is currently the very latest version (1.03c). Go on, upgrade anyway, it's free, you'll probably find some handy find features you never knew were there, and you'll get used to it soon enough.

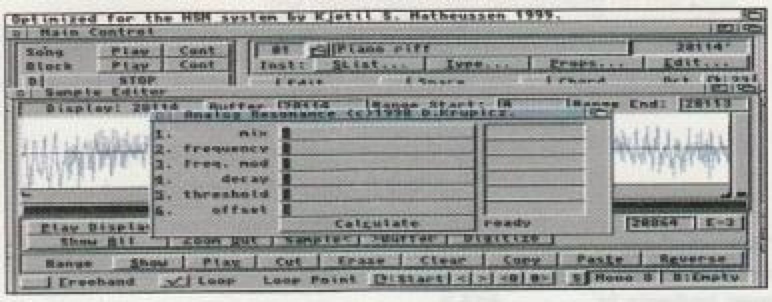
Q I've got a Triple Play Plus 48 channel MIDI interface lying around somewhere. I don't suppose there's an NSM plug-in to take advantage of it?

A Funny you should ask, yes there is! It's called *MIDI_send* and it also adds some extra MIDI output features to *SoundStudio*.

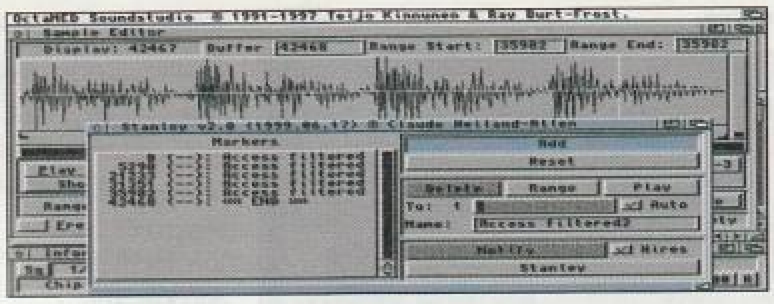
Q How do I go about writing my own *NSM* plug-ins?

A Assuming you can program in C, read the autodocs that come in the main archive.

All of this has stemmed from the existing ARexx features of *SoundStudio*, which allow scripts to be called which can then work within the *SoundStudio* system. Kjetil Matheussen came up with the idea for *NSM* after investigating the possibilities of ARexx plug-ins. The trouble with ARexx is that it's pretty slow, so complex ARexx plug-ins could take ages to do a relatively simple job. For example, processing samples could take a few minutes. Kjetil wanted to write his own plug-ins in C instead of ARexx, and so *NSM* was created as a kind of bridge system to make this possible. The original idea was to write algorithmic composing programs (hence the name), but now it has been put to wide range of other uses.



SoundStudio's sample editor can be upgraded with these plug-ins. This one adds a resonant filter effect to those already available.



It's not quite Steinberg Re-Cycle (by a long chalk), but the Stanley plug-in does ease and speed up the process of chopping up samples into smaller pieces.

SHORTCUTS

NSM takes advantage of *SoundStudio*'s Keyboard Shortcuts menu option. This is a very powerful part of *SoundStudio*, as it not only allows you to redefine the main keyboard shortcuts, but it also gives you access to stacks of automated tasks in the form of internal ARexx-type scripts. Furthermore, you can use this section to define shortcuts for your own ARexx scripts or those written by other users. This is how plug-ins work with ARexx. NSM plug-ins work by exploiting *SoundStudio*'s ability to also launch external programs.

Once the system and some plug-ins have been installed (have a good read of the documentation, and read it all again if it doesn't seem to work), you should be able to try things out. Because the *NSM* plug-ins are little programs in themselves, you could bypass the recommended keyboard shortcut route and simply run them from `RAM:nsm/` where they should be after you boot up. This isn't recommended, but if you know that, at least you've got a better idea of what's going on behind the scenes, should you need to get your hands dirty when things go wrong. Look at the How it Works box for a quick guide to setting it up.

PICK OF THE POPS

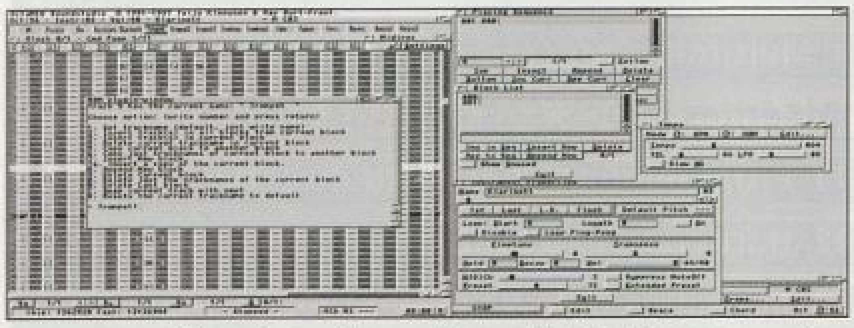
Rather than go through the whole lot, I thought it would be more useful if I introduced you to some of my favourites, what they can do and how they work (or don't, if you've not installed everything properly).

First up is Resonance. It was originally made as an ARexx plug-in by D Krupicz, but was remade in C by Kjetil. It processes the current ranged portion of a sample with an analogue-style resonant filter, although as it stands it doesn't seem to be much good for longer samples. However, it does a nice job, and now it's much faster than it was in ARexx format. You get a nice little GUI to work with too, so it's very easy to use.

Another of my favourites is also a kind of filter. Actually it's lots of types of filter. This one is by Claude Heiland-allen (anyone can write their own *NSM* plug-ins if they feel the urge). Unfortunately this one works more like a Shell command rather than having its own slider-filled window. However, *cha_filter*, as it's called, is very powerful, with the ability to process your

INTERNET RESOURCES

As ever, the net proves a valuable source of software and advice. You should find all the necessary software on the CD, but check the NSM homepage for updates and further information: http://www.stud.ifi.uio.no/~ksvalast/nsm/ Also check out the OctaMED website, from where you'll find instructions on how to join the extremely helpful OctaMED mailing list: http://www.octamed.co.uk



The Tracknames Window plug-in adds a sorely needed feature to SoundStudio, allowing you to make notes of which sounds are used in which tracks.

instruments with lots of scientific-sounding filters, with bandpass, lowpass, highpass, resonator and bandstop options among many others. To get the most from this one you'll need to set up a number of different keyboard shortcuts, each calling the *cha_filter* plug-in with a different set of arguments. For example, you could set up one to remove low frequency hum, another to roll-off high pitched interference, one to 'enhance' your samples by boosting top and bottom frequencies, and so on.

For example, here's one to boost low frequencies:

```
nsm: cha_filter from 1 to 2
resonator bandpass frequency 200
qfactor 20
```

and here's one to remove low frequencies:

```
nsm:cha_filter from 1 to 2
butterworth bilinear order 4
highpass frequency 200
```

Then there's the endearingly named *Stanley*. I guess *Stanley* gets its name from the brand of knife that's a staple of any good toolbox, since this plug-in is used to chop up a sample and arrange the pieces into the following instrument slots. This is handy if, like me, you find yourself constantly chopping up breakbeats into smaller bits and having to manually set up new instruments for the different parts. With *Stanley*, you just mark a few points on the sample and tell it to go to work.

BEST OF THE REST

Others to watch out for include *AutoTempo*. I should admit that I've not yet got this one to work, but it should take a sample, such as a drum loop, and automatically adjust the instrument's finetune and transpose settings so that it will loop perfectly at the current tempo setting when played at note C-3.

Another one that sounds very interesting but has so far refused to play ball is *MIDI_record*. As you might have guessed, this is designed to record certain MIDI information (as you specify) from your MIDI device into the tracker window. For example, you could record the modulation or resonance knob-twiddlings into your sequence, later to be replayed automatically.

A WORD OF WARNING

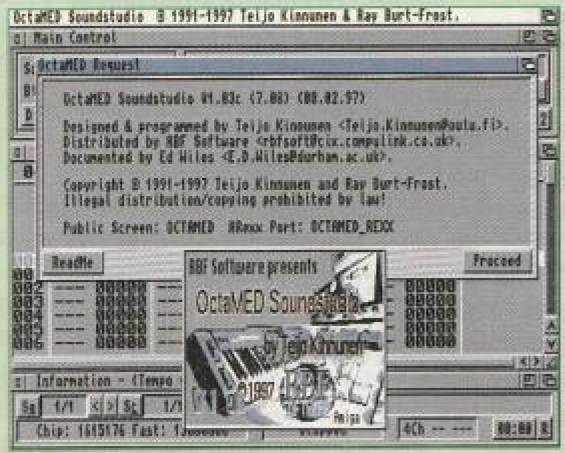
In the event that you have a go at this and nothing seems to happen, I would urge you to take a deep breath, read everything again, and keep trying, as it is worth it. Not only should you make sure you've got the main *NSM* system setup properly, but also check any documentation that comes with the plug-ins, as these often have special requirements of their own.

An automated installer for the *NSM* system is planned, which will make things a bit simpler, although it looks as though we'll probably still have to do a lot of the setting up ourselves. As Kjetil points out, he's only doing this in his spare time anyway, and has spent over 500 hours on the project so far, so maybe it's not too much to ask us to spend a short time tinkering with start-up scripts and archives.

Tony Horgan

HOW IT WORKS

All NSM plug-ins are actually executable programs which remotely control *SoundStudio*. Once you've installed the NSM system according to the documentation, you should find that you've got a load of files in a folder called 'nsm' in your RAM: disk. These programs are the plug-ins. Assuming you've already got this far, this is how to put them into use...



OctaMED Soundstudio © 1991-1997 Teijo Kinnunen & Ray Burt-Frost.

OctaMED Request

OctaMED Soundstudio V1.03c (7.08) (08.02.97)

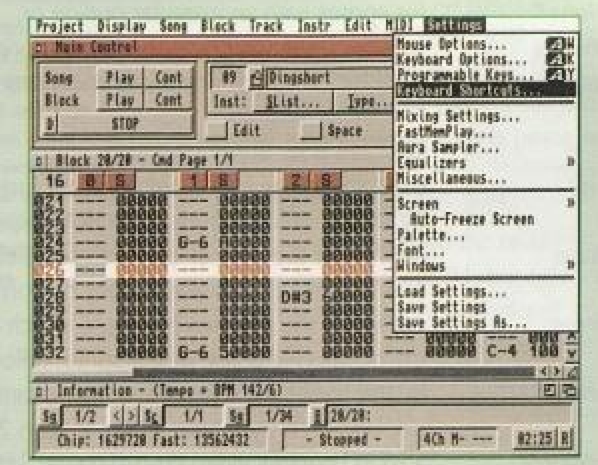
Designed & programmed by Teijo Kinnunen <Teijo.Kinnunen@oulu.fi>.
Distributed by RBF Software <rbfsoft@cix.compulink.co.uk>.
Documented by Ed Wiles <E.D.Wiles@durham.ac.uk>.

Copyright © 1991-1997 Teijo Kinnunen and Ray Burt-Frost.
Illegal distribution/copying prohibited by law!

Public Screen: OCTAMED ARexx Port: OCTAMED_REXX

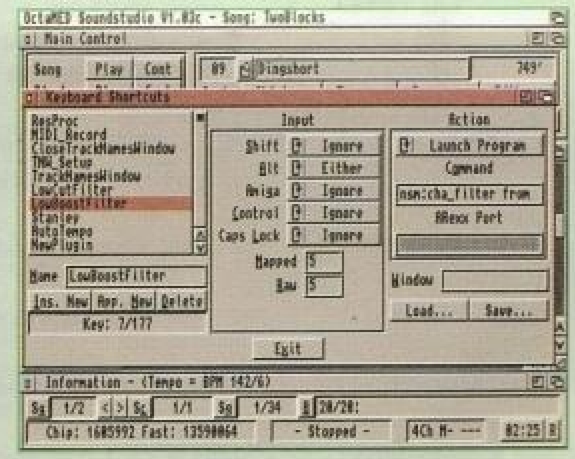
ReadMe
Proceed
RBF Software presents
OctaMED Soundstudio
by Teijo Kinnunen
©1997 RBF
Amiga

Start SoundStudio, making sure that you're using V1.03c.



Project Display Song Block Track Instr Edit MIDI Settings
Mouse Options...
Keyboard Options...
Programmable Keys...
Keyboard Shortcuts...
Mixing Settings...
FastMemPlay...
Aura Sampler...
Equalizers
Miscellaneous...
Screen
Auto-Freeze Screen
Palette...
Font...
Windows
Load Settings...
Save Settings
Save Settings As...

Choose Keyboard Shortcuts from the Settings menu.



Keyboard Shortcuts

ResProc
MIDI_Record
CloseTrackNamesWindow
TNW_Setup
TrackNamesWindow
LowCutFilter
LowBoostFilter
Stanley
AutoTempo
NewPlugin
Input
Action
Launch Program
Command
ARexx Port
Window
Ins. New
App. New
Delete
Load...
Save...
Exit

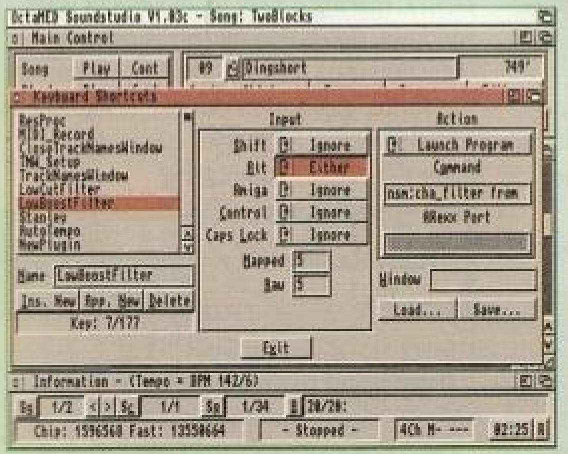
Name: LowBoostFilter

Shift: Ignore
Alt: Either
Amiga: Ignore
Control: Ignore
Caps Lock: Ignore
Mapped: 5
Raw: 5

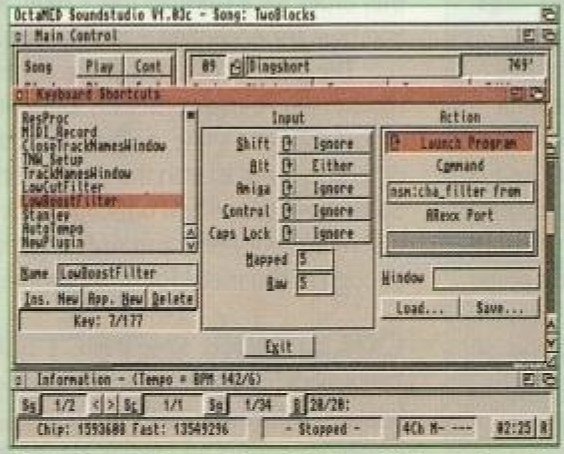
Command: nsm:cha_filter from

Key: 7/177

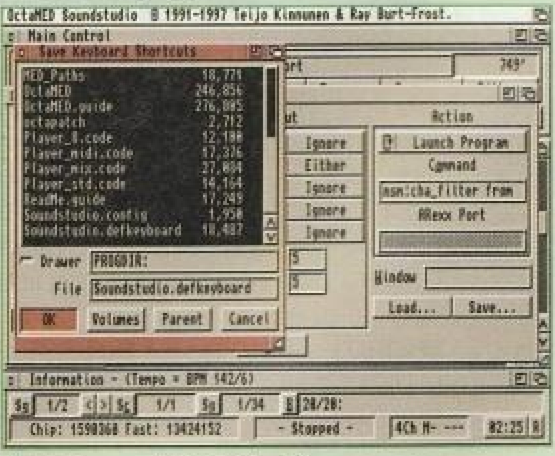
Click the Ins New button and enter a descriptive name of the plug-in in the Name box.



Decide on a combinations of keys that will launch this plug-in, and define them in the input section of the window, typing the alpha-numeric key into the Mapped box.



Click the Action cycle gadget until it reads Launch Program. In the Command box, enter "nsm:" followed by the filename of the actual plug-in that you want to launch, followed by any arguments that may be required.



Save Keyboard Shortcuts

Drawer: PROGDIR:
File: Soundstudio.defkeyboard

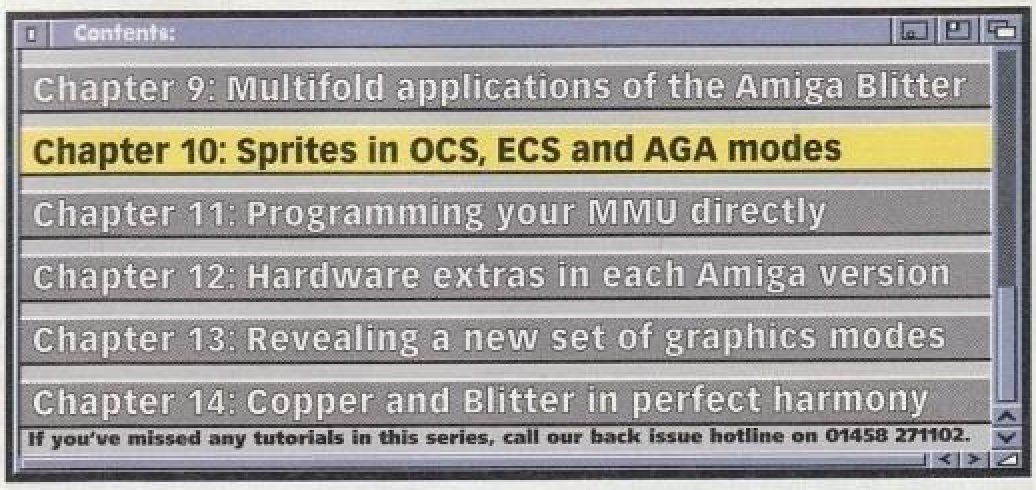
OK
Volumes
Parent
Cancel

Click Save and OK in the file requester. Close the Keyboard Shortcuts window, hit your key combination and (with any luck) watch your plug-in take effect.

Banging the Metal

The tricks and secrets of AGA sprites revealed

On the CD
-In_the_Mag-/Banging_The_Metal



Chapter 9: Multifold applications of the Amiga Blitter
Chapter 10: Sprites in OCS, ECS and AGA modes
Chapter 11: Programming your MMU directly
Chapter 12: Hardware extras in each Amiga version
Chapter 13: Revealing a new set of graphics modes
Chapter 14: Copper and Blitter in perfect harmony

If you've missed any tutorials in this series, call our back issue hotline on 01458 271102.

Overlays are basic display components, from mouse pointers to game characters, so Amigas have special hardware to superimpose extra images, known as 'sprites', upon playfields. Sprites were devised for game elements like missiles and *Pacman* ghosts, and since used for pointers, sights and score overlays.

Sprites boost the smoothness and efficiency of Amiga systems. Windows pointers lag and jump because they are not updated every display field. Macintosh pointers blink and program windows are updated slowly if the pointer overlaps them, as MacOS repeatedly merges the images at every update.

OCS and ECS Amigas have eight sprite DMA channels. Each fetches two planes of 16-bit data at the start of every scan line. Individual sprites can be up to 16 pixels wide, or you can group them together to move a bigger pattern across the screen.

'Attached' pairs of sprites deliver four bits of data instead of two for each pixel, allowing 15 colours, rather than three. One combination of bits allows 'transparency', for sprites with an irregular outline or window holes revealing the background, ideal for cross-hairs and alignment marks.

SPRITE ENGINES

Each sprite has four word registers, primed by DMA transfers from a chip RAM sprite address at the start of every display field. This address points at two control words copied to the first two registers, which set the position and size of the sprite, followed by the sprite graphic pattern. The example displays a 16 by 9 pixel sprite at scan 200, 120 in Low Res video co-ordinates. Set colour registers to black, red and yellow in that order for a German flag – blue, white and blue for Argentina – or whatever.

The Copper can reload the control registers to re-use sprites on lower lines, repeat them on a line, or reset the data for a different image later in the same scan line! Sprite re-use is potent but complex in assembly code; Blitz and AMOS get close enough to the metal for most purposes.

COLLISION DETECTION

The Amiga hardware detects 'collisions' between images on the screen as it combines sprites and playfields. When bitplanes and sprites collide, bits are set in register CLXDAT. CLXCON lets you indicate which sprites and bitplanes are to be tested. If a bitplane is selected for collision detection, the value of the corresponding bit of the display is compared with a low-order bit from CLXCON.

If these bits match, a 'collision' is indicated when a sprite passes over that pattern. You can also detect collisions between playfields. At least one plane must be selected for collision detection, or continuous 'collisions' will be reported. A playfield can appear in front of or behind the other, with four pairs of sprites, in ascending order, underneath, on top, or anywhere between them, depending on register BPLCON2 (*AHRM* page 209). Collision detection groups sprites likewise in four odd/even pairs, from 0,1 to 6,7.

Palette choices allow sprites to pass over certain colours but be blocked by others, making it easy to implement walls, windows, doors and mirrors. Collision detection uses the non-transparent part of the sprite, so it's pixel-perfect, unlike checks for intersecting rectangles common on games for lesser computers.

Our AMOS sprite demo bounces balls over any background.

SPRITE HARDWARE REGISTERS

$00E	CLXDAT	Collision indications
	Bit 15	not used (not yet, anyway)
	Bit 14	sprite 4 or 5 hit sprite 6 or 7
	Bit 13	sprite 2 or 3 hit sprite 6 or 7
	Bit 12	sprite 2 or 3 hit sprite 4 or 5
	Bit 11	sprite 0 or 1 hit sprite 6 or 7
	Bit 10	sprite 0 or 1 hit sprite 4 or 5
	Bit 9	sprite 0 or 1 hit sprite 2 or 3
	Bits 5-8	sprite pair hit playfield 2
	Bits 1-4	sprite pair hit playfield 1
	Bit 0	selected playfield bits collide
$098	CLXCON	Collision control
	Bits 12-15	detect sprite pair collisions
	Bits 6-11	enable plane 1-6 comparisons
	Bits 0-5	plane 1-6 collision bit pattern
$104	BPLCON2	Bitplane control
	Bits 0-6	sprite/playfield priority
$120	SPR0PT	sprite 0 data start address
$124	SPR1PT	sprite 1 data start address
$13C	SPR7PT	sprite 7 data start address
$140	SPR0POS	Sprite 0 X & Y start co-ordinates
	Bits 8-15	bits 0 to 7 of VSTART vertical start
	Bits 0-7	most significant bits of HSTART edge
$142	SPR0CTL	Sprite 0 position and control bits
	Bits 8-15	bits 0 to 7 of VSTOP vertical limit
	Bit 7	attach odd sprite to previous even one
	Bits 3-6	unused in OCS (original chip set)
	Bit 2	ninth bit of vertical VSTART position
	Bit 1	ninth bit of sprite VSTOP line number
	Bit 0	HSTART odd or even in Low Res pixels
$144	SPR0DATA	sprite 0 image data, low plane
$146	SPR0DATB	sprite 0 image data, high plane
$148	SPR1POS	sprite 1 registers, like sprite 0
$178	SPR7POS	sprite 7 registers, like sprites 0-6

FLAG SPRITE EXAMPLE

Low byte of Vertical Start: 120
High byte of Horizontal Start: 100
Low byte of Vertical Limit: 129
Control byte (see SPR0CTL): 0
First stripe words: -1,0,-1,0,-1,0
Second stripe words: 0,-1,0,-1,0,-1
Third stripe words: -1,-1,-1,-1,-1,-1

AGA SPRITE REGISTER ENHANCEMENTS

$10E	**CLXCON2**	**Extended collision control**
	Bit 7	set enables collision tests against bitplane 8
	Bit 6	set enables collision tests against bitplane 7
	Bit 1	state of bit in bitplane 8 that signals collision
	Bit 0	state of bit in bitplane 7 that signals collision
$106	**BPLCON3**	**Sprite resolution and border**
	%xxxxxx1x = Bit 1	enables AGA sprites in the border
	%00xxxxxx = ECS	default (140ns/70ns Super-High Rres)
	%01xxxxxx = AGA	Low Res (140 ns per pixel)
	%10xxxxxx = AGA	High Res (70 ns per pixel)
	%11xxxxxx = AGA	Super-High Res (35 ns per pixel)
$108	**BPLCON4**	**Even and odd sprite palette bank**
	%0001xxxx = Top 4	palette bits for sprites 0, 2, 4, 6
	%xxxx0001 = Top 4	palette bits for sprites 1, 3, 5, 7
$14x	**SPRxCTL**	**AGA sprite control extensions**
	Bit 6	most significant bit of vertical VSTART
	Bit 5	most significant (tenth) bit of VSTOP
	Bit 4	HSTART odd or even in High Res pixels
	Bit 3	HSTART finest control: 35 ns delay
$1FC	**FMODE**	**Bits 2 and 3 set sprite fetch mode**

AGA EXTENSIONS

AGA sprites can be double or quadruple width, and in any resolution, independent of the rest of the display. Eight AGA sprite channels can make a three colour image 512 pixels wide, or 15 colours across 256 pixels, equivalent to a third playfield, for colourful parallax.

Bit 1 of custom chip register BPLCON3 lets sprites appear in the border, where they'd normally be blanked. The Silicon Studio mixer uses a tall border sprite for tabs down the left-hand side of the screen, soaking up the wide left margin AGA otherwise leaves on multisync screens while it's handling other DMA channels. VGA monitors expect lines twice as often, making the marginal overhead otherwise conspicuous in DBL modes.

ECS sprites are fixed at Low Res, 140 ns per pixel, halved in Productivity and Super-High Res modes. AGA defaults likewise, but BPLCON3 bits 6 and 7 offer 140, 70 or 35 ns (Super-High Res) resolutions. Resolutions affect sprites globally, but the Copper can change these for successive screen slices.

This mixer GUI by Simon Jenkins and Mark Knight uses 24-bit copper stripes, two pointers and a border sprite to make the best of AGA on a VGA screen.

Sprites in AMOS BASIC

```
Rem Amiga Format Bouncing Sprite demo adapted by SNG from ULTIMATE AMOS
Screen Open 0,320,200,32,Lowres : Load Iff "EscherDrops.ilbm" Flash Off
Curs Off : Hide On : Load "NEWBALL.ABK" : Wait 10
RATE=5 : BALLS=8 : For I=17 To 31 : Read P : Colour I,P : Next I
Data $FFF,$DDD,$AAA,2,$FF0,$DD0,$AA0,3,$F00,$D00,$A00,4,$F0F,$D0D,$A0A

BASE=235 : LEFT=130 : RIGHT=420 : Dim SP(BALLS-1,4) : X=0 : Y=1 : W=2 :
H=3
For C=0 To BALLS-1 : SP(C,W)=Rnd(RATE)+1 : SP(C,H)=Rnd(RATE)+1 : Next C

Repeat : For C=0 To BALLS-1
    SP(C,H)=SP(C,H)+1 : SP(C,X)=SP(C,X)+SP(C,W)  : SP(C,Y)=SP(C,Y)+SP(C,H)
    If SP(C,Y)>BASE Then SP(C,Y)=BASE : SP(C,H)=-SP(C,H)  : Rem Bounce Up
    If SP(C,X)>RIGHT Then SP(C,W)=-Rnd(RATE)-1 : SP(C,H)=Rnd(RATE*2)+1
    If SP(C,X)<LEFT Then SP(C,W)=Rnd(RATE)+1 : SP(C,H)=Rnd(RATE*3)+1
    Sprite C+1,SP(C,X),SP(C,Y),1 : Next C : Wait Vbl
Until Fire(0)+Fire(1) : Rem Press Fire or Left mouse button to stop
```

AGA sprites allow 32- and 64-bit fetch-modes. Chapter seven revealed how FMODE bits 0 and 1 allow twice or four times as much playfield data to be accessed. Bits 2 and 3 do the same for AGA sprites, giving widths up to 64 pixels.

Like bitplanes, sprite data must be 32- or 64-bit aligned for fast AGA fetches. The initial sprite control words are duplicated so required values are always available to the AGA logic. 16-bit sprites used two words, C1 and C2, but if sprites are 32-bits wide, they must start with C1, C2, C2, 0, followed by 32-bit data for each sprite plane. 64-bit sprites start with eight control data words: C1, C2, C2, 0, C2, 0, 0, 0. Duplication ensures that C2 remains available when extra data is being fetched.

MORE COLOURS

Old Amiga sprites used the second half of the palette, registers 17 to 31, but AGA ones can be switched between 16 banks of 16 colours. Odd and even sprites have their own four bit controls in BPLCON4, accessing two distinct sets of colours. The default %0001 uses the same registers as ECS.

AGA sprites can collide with an extra couple of bitplanes, so a new collision detection register CLXCON2 was added, automatically cleared when you update the old CLXCON register. Setting the top 4 bits of CLXCON then bits 1 and 7 in CLXCON2 checks all sprites against collisions with background colours 128 to 255.

NEXT ISSUE

Our Millennial chapter delves into hardware memory management. Commodore never released guidelines on programming Amiga MMUs, making it a black art, confined to those with the hardware manual for their specific processor variant. I'll explain the principles, and how Thor's mmu.library enables powerful, portable memory management code on any suitably equipped Amiga.

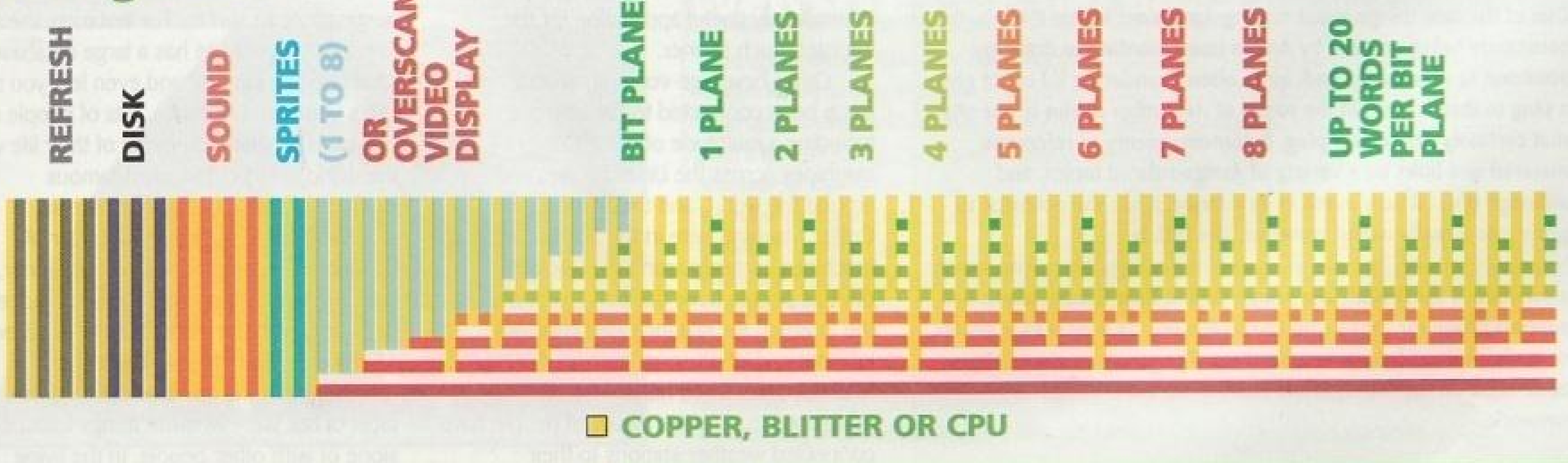
Simon Goodwin

enemy
stage 1
life 1
score

ECS games like EA's Risky Woods build a complete playfield by tessellating sprites in the background.

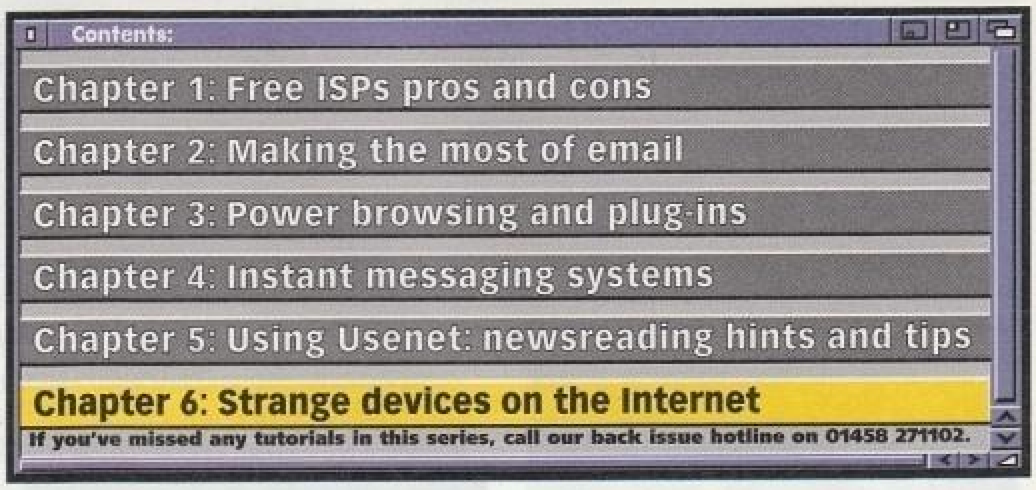
Timing Chart

Data for up to eight sprites is fetched automatically at the start of each scan line.



Amiga.net

This issue's whirlwind tour of the Internet takes a look at some of the bizarre devices that people have decided to connect to it



Chapter 1: Free ISPs pros and cons
Chapter 2: Making the most of email
Chapter 3: Power browsing and plug-ins
Chapter 4: Instant messaging systems
Chapter 5: Using Usenet: newsreading hints and tips
Chapter 6: Strange devices on the Internet

If you've missed any tutorials in this series, call our back issue hotline on 01458 271102.

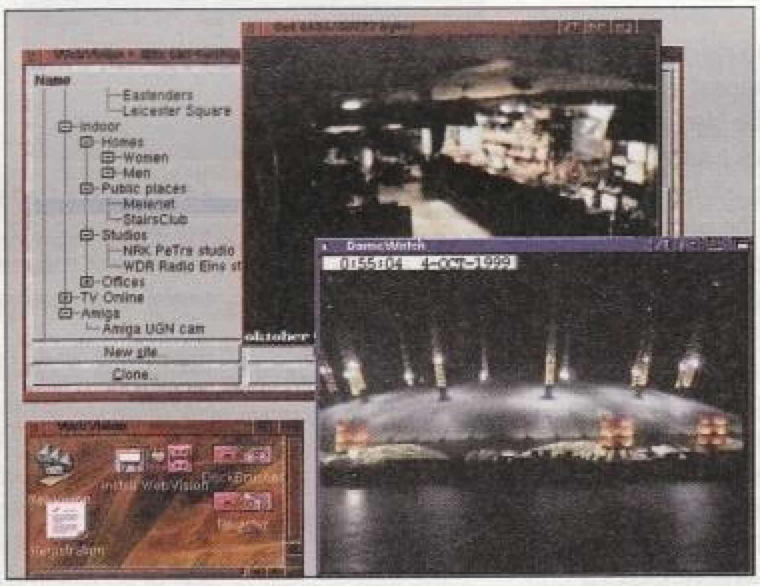
CONTACT POINT

You can contact me with your comments, questions and suggestions at dave@cusick.co.uk **or through my website at** http://www.cusick.co.uk.

Although the Internet was first conceived in the '60s by the US Defence Department's Advanced Research Projects Agency, it was during the '80s and early '90s that it underwent its most significant shaping – principally by students.

While today there are probably around 30 million unique hosts on the Internet, and a total of more than 200 million people probably connected to the network, back in 1980 there were only about 200 hosts, and in 1990 perhaps 300,000. During the '80s, Internet growth came about largely because more and more academic institutions were getting connected to the network. Now students being students (generally having plenty of intelligence, a sense of humour and too much time on their hands), it's probably not altogether surprising that the notion of having a network to which they could attach their PCs inspired many to experiment. They realised that with a little effort they could connect all kinds of devices to the Internet, either directly or through their computer. So it was that in the early '80s, the students in the Computer Science department at Carnegie-Mellon University decided to wire their Coke machine up to the Internet. The advantages of doing this were immense – they could save themselves walking a few yards down the corridor only to discover that the cans in the machine were warm, or that worse still the machine was all out of cans. Indeed, it's hard to think why nobody thought of such a marvellously useful application for the Internet much sooner.

> *In the early '80s Computer Science students at Carnegie-Mellon University decided to wire their Coke machine up to the Internet*



WebVision is a useful tool if you're a big webcam fan.

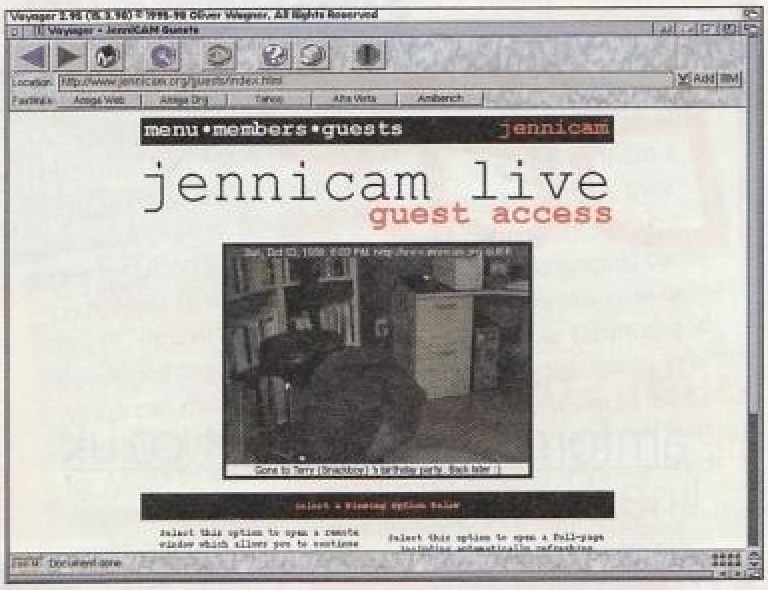
Other beverage-vending devices have since been connected to the Internet, including a multitude of other Coke machines across the United States and around the world, and the Trojan Room Coffee Machine here in the UK. But vending machines certainly aren't the wackiest devices people have decided to connect to the Internet; for instance Paul Haas, an Internet and UNIX consultant from Michigan, has wired his hot tub and refrigerator to the net. Plenty of people have connected weather stations to their machines too and allow access to these stations via the web. If you want to view real-time readings from weather stations in California or, more interestingly, in Antarctica, then you can do so quite easily. It's a little bit different from looking at Yahoo's weather forecasts, at any rate. Probably the most common device people connect to the Internet is a webcam.

Webcams pointing at interesting places can act as virtual windows on the world, and sites which provide links to a multitude of different cameras can make fascinating destinations to surf to. For instance, the Random Camera site has a large database of sites you can jump to and even lets you add URLs yourself. Of course, lots of people use webcams to share moments of their life with the world at large. The most famous example of this is probably Jennicam.

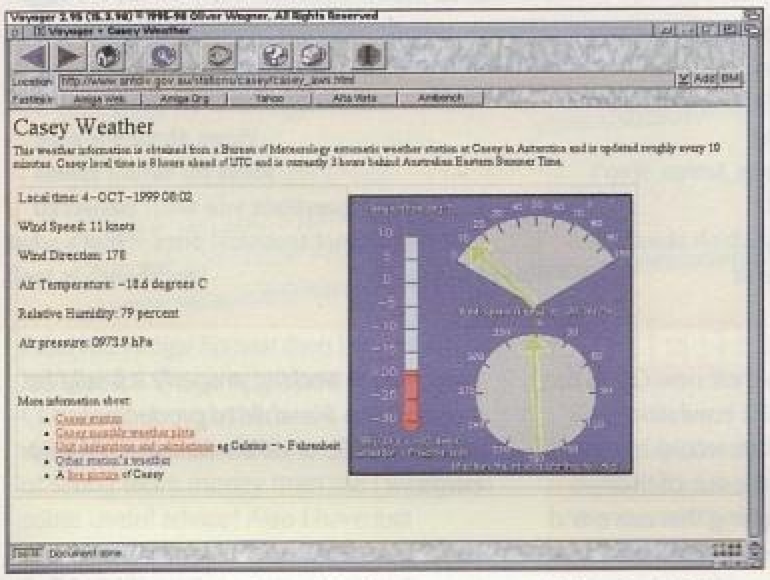
Back in 1996, Jenni, a 23-year old Economics student turned web designer, chose to share bits of her life (and, indeed, her body) with the world at large once every 15 minutes. Not long afterwards, she realised that if the cameras covered every facet of her life – whether things took place alone or with other people, in the living

HONOURABLE MENTIONS

One of the nice things about writing Amiga.net is that I'm constantly being emailed by Amiga users wanting to draw my attention to new things and, quite often, wondering if I could give a plug to their efforts in the pages of *AF*. Amiga Realm is one site that certainly deserves a plug. It contains plenty of reference material and links on a variety of Amiga-related topics, and although it's still very much in its infancy, it has the potential to grow into a really useful resource. The URL is http://www.thescript.demon.co.uk/amiga/index.htm. **Also worth a mention is thAOUGht, The Amiga Online User Group, which is a support group for those who can't get along to a local user group, or perhaps don't have one near them. The group meets at 10pm each night on the #Amigazone channel on the DALnet IRC network.**


menu•members•guests
jennicam
jennicam live
guest access
Gone to Terry (Snackboy)'s birthday party. Back later :)

Jennicam, possibly the most famous webcam site in the world.



Casey Weather

Local time: 4-OCT-1999 08:02

Wind Speed: 11 knots

Wind Direction: 178

Air Temperature: -18.6 degrees C

Relative Humidity: 79 percent

Air pressure: 0973.9 hPa

Find out what the weather's like at the south pole. In real time. Neat, eh?

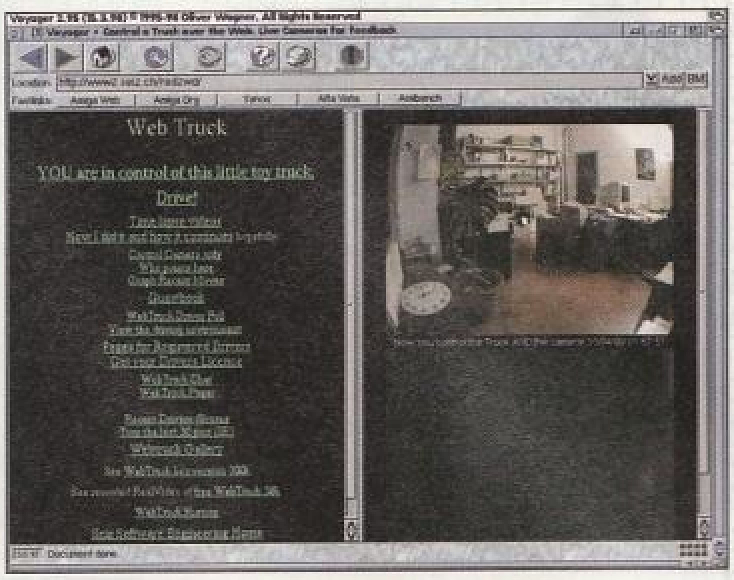
room or bedroom – she could charge people to view more regularly updated snapshots. Jenni's now famous and, I should imagine, financially quite comfortable. If the popularity of Jennicam and other webcam sites is anything to go by, there's something that many folk find strangely compulsive about observing the lives of others. It might well be the same curiosity that ensures docu-soaps consistently do well in the TV ratings.

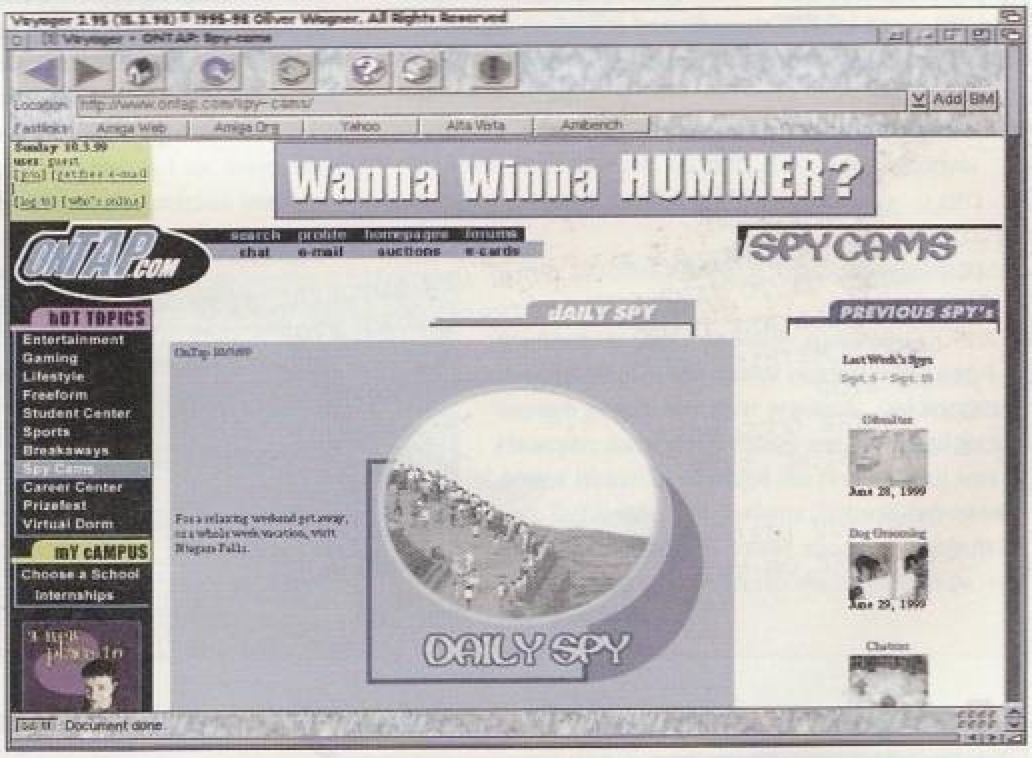
You can watch all sorts of lives unfold. If you want to see students sitting around in a house in Sheffield, you can, by pointing your browser at the Student House site. Alternatively there's the TruckCam site which is a webcam with a difference; you can control the remote-controlled trucks that you're looking at. If you want to hunt through a huge number of webcams in search of something fascinating, there's a fairly lengthy list at the Webcams site. If you regularly visit webcam sites you might want to break out of the confines of your web browser and use a specially designed program to view images. Using a specialist viewing program has a number of advantages, not least of which is the fact that you can specify times for the software to reload the webcam picture rather than having to click the reload button in your browser. You can also save images to your hard disk so that you can view them again at your leisure. *WebVision 2.0*, available from the comm/tcp directory of Aminet, is worth a look if you fancy something like this. There are also alternatives such as *CamWatch* and *SpyMaster 2000* (cryptically named DC-Spy14.lha on Aminet, although I can assure you the DC is nothing to do with me). A few Amiga owners operate their own webcams, and there's nothing to stop you connecting a webcam to your machine and making the images it produces available through your personal website.

Scripts are available that allow you to upload images to your home page via FTP whenever you're online; they automate the process, so you can be surfing or chatting and your camera can be periodically uploading fresh pictures for the world to see. Scripts such as *Qcamwebcam*, again from Aminet, can do this – this particular script is designed for folks who've got a black and white Connectix Quickcam. If you have VidiAmigaRT, you could use *SpyCam*, a script which lets you employ a video camera as a webcam.

Dave Cusick

More fun than Tonka trucks at the TruckCam site.


Web Truck
YOU are in control of this little toy truck.
Drive!


Wanna Winna HUMMER?
ONTAP.COM
SPY CAMS
DAILY SPY
PREVIOUS SPY's
hOT TOPICS
Entertainment
Gaming
Lifestyle
Freeform
Student Center
Sports
Breakaways
Spy Cams
Career Center
Prizefest
Virtual Dorm
mY cAMPUS
Choose a School
Internships
DAILY SPY

The SpyCams site contains plenty of links to interesting webcams.

live cameras!
WWW.STUDENTHOUSE.NET/FATSFLAT
WWW.SISTERSWALKER.ORG

Students never do anything – here's the proof.

WEBSITES OF INTEREST

Carnegie-Mellon University Coke Machine - http://www.cs.cmu.edu/~coke/
Trojan Room Coffee Machine - http://www.cl.cam.ac.uk/coffee/coffee.html
Internet-accessible Coke machines - http://www-cse.ucsd.edu/users/bsy/coke.html
Paul's Hottub - http://hamjudo.com/cgi-bin/hottub
Weather in California - http://ipmml.cse.ucsc.edu/reinas/instrument-tour/
Weather in Antarctica - http://www.antdiv.gov.au/science/atmos/aws/weather.html
Random Camera - http://www.xmission.com/~bill/randcamera.html
Jennicam - http://www.jennicam.org
Student house - http://student-house.areti.co.uk
TruckCam - http://www2.seiz.ch/red2wd/
WebCams - http://www.webcams.org
SpyCams - http://www.spy-cams.com
Connecting a Connectix Camera to your Amiga - http://www.iol15.com/smouse/info.htm

MailBag

Letters to the Editor
Amiga Format
30 Monmouth St

Send your letters to: Letters To The Editor • *Amiga Format* • 30 Monmouth Street • Bath • Somerset • BA1 2BW or email: amformat@futurenet.co.uk – putting 'Mailbag' in the subject line.

SPARE US

- **Long, looong letters with numerous points. Keep it concise!**
- **Emails that don't make any sense**
- **Illegible handwriting**
- **Questions asking why Amiga aren't advertising on ITV yet**
- **Technical questions which should be addressed to Workbench**

SEND US

- **Your news**
- **Opinions on software you're using**
- **Your comments on these letters**
- **Views about the mag**
- **Ideas for future issues**
- **General questions you want answered (not technical ones – that's what Workbench is for!)**

WHERE'VE YOU BEEN?!

It seems to me that the reason why we haven't seen many killer software packages for PPC is because the boards are too expensive, thus not many people are buying them. To solve the problem slightly, would it be effective for phase 5 to release a PPC board without a 68K Processor on board? Instead of the 68K processor perhaps emulation in software form could be developed to run a 68K processor.

I realise that this operation would probably be painstakingly slow if the entire OS had to be emulated, however, I don't see any reason why a PPC OS could be developed with 68K emulation for other software. I know that *OS 3.5* will have greater PPC support in the form of WarpOS, but this is not full PPC support and still requires the 68K processor.

Couldn't QNX develop their new OS to run entirely on PPC with 68K emulation integrated in the OS? This would undoubtedly reduce the price of the accelerator boards meaning that more and more people would be able to afford them, perhaps meaning we would see a greater line of PPC software in the future. Also, if the new G4 accelerators were developed this way surely there would not be much difference in the speed through emulation?

As a last point: Don't you see Jim Collas' departure from Amiga as a bad indication for the future? I do, however still try and be optimistic. Cheers for a great mag.

Dave Pearce
via email

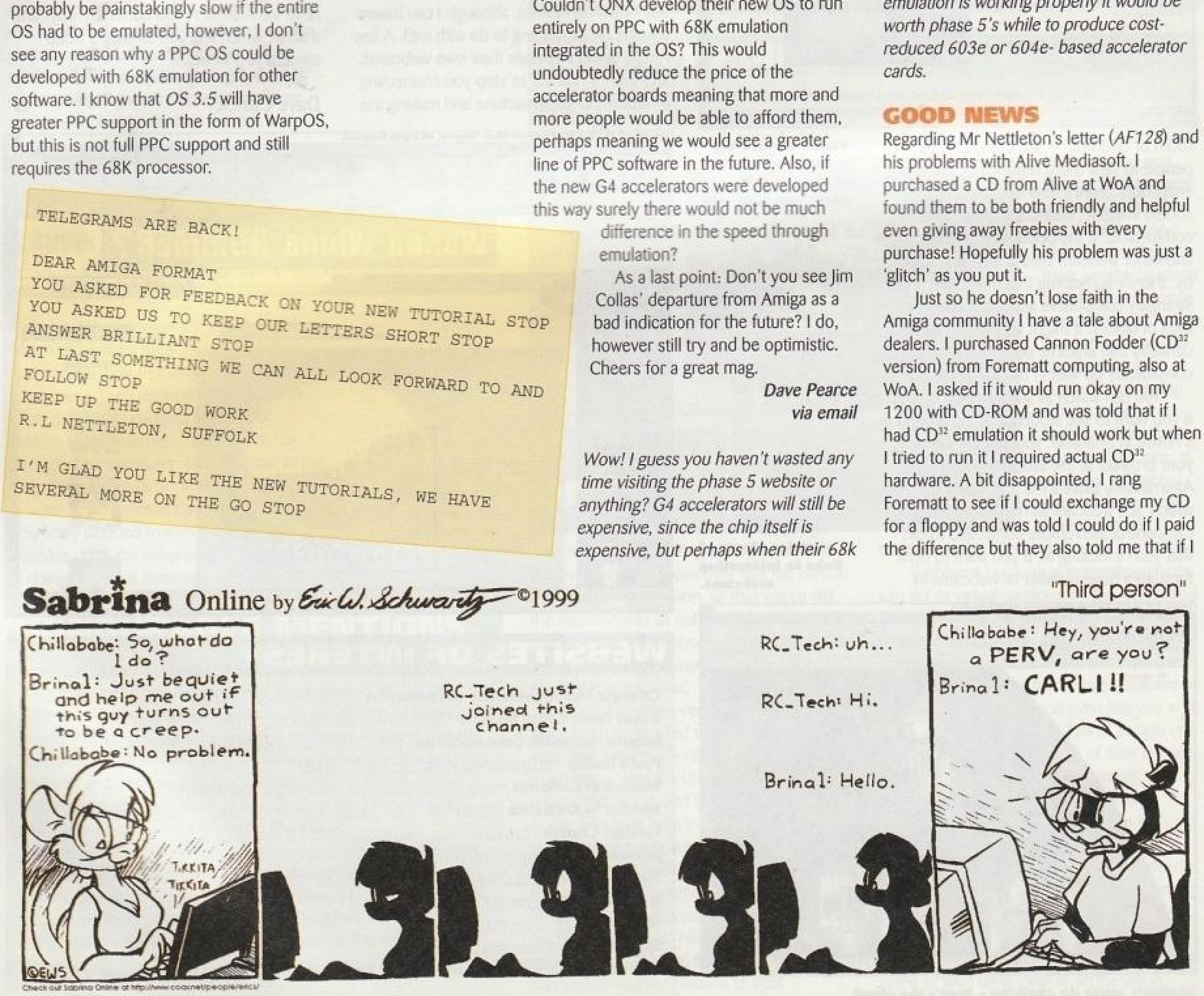
Wow! I guess you haven't wasted any time visiting the phase 5 website or anything? G4 accelerators will still be expensive, since the chip itself is expensive, but perhaps when their 68k emulation is working properly it would be worth phase 5's while to produce cost-reduced 603e or 604e- based accelerator cards.

```
TELEGRAMS ARE BACK!

DEAR AMIGA FORMAT
YOU ASKED FOR FEEDBACK ON YOUR NEW TUTORIAL STOP
YOU ASKED US TO KEEP OUR LETTERS SHORT STOP
ANSWER BRILLIANT STOP
AT LAST SOMETHING WE CAN ALL LOOK FORWARD TO AND
FOLLOW STOP
KEEP UP THE GOOD WORK
R.L NETTLETON, SUFFOLK

I'M GLAD YOU LIKE THE NEW TUTORIALS, WE HAVE
SEVERAL MORE ON THE GO STOP
```

GOOD NEWS

Regarding Mr Nettleton's letter (*AF128*) and his problems with Alive Mediasoft. I purchased a CD from Alive at WoA and found them to be both friendly and helpful even giving away freebies with every purchase! Hopefully his problem was just a 'glitch' as you put it.

Just so he doesn't lose faith in the Amiga community I have a tale about Amiga dealers. I purchased Cannon Fodder (CD^{32} version) from Forematt computing, also at WoA. I asked if it would run okay on my 1200 with CD-ROM and was told that if I had CD^{32} emulation it should work but when I tried to run it I required actual CD^{32} hardware. A bit disappointed, I rang Forematt to see if I could exchange my CD for a floppy and was told I could do if I paid the difference but they also told me that if I


Sabrina Online by Eric W. Schwartz ©1999
"Third person"
Chillababe: So, what do I do?
Brina1: Just be quiet and help me out if this guy turns out to be a creep.
Chillababe: No problem.
TIKKITA TIKKITA
©EWS
RC_Tech just joined this channel.
RC_Tech: uh...
RC_Tech: Hi.
Brina1: Hello.
Chillababe: Hey, you're not a PERV, are you?
Brina1: CARLI!!

Check out Sabrina Online at http://www.coax.net/people/erics/

NEW AMIGA TOO EXPENSIVE?

Dear AF, Now that Gateway have decided not to make the new Amiga this is good news. If you look at companies like Microsoft and Apple for example, Apple will not licence other companies to make Apple computers, which gives them a limited exposure. Microsoft have a better advantage, they only focus on their operating system allowing other companies to make super Computers and 3D graphic cards. The PC industry is huge with loads of exciting products being developed to run on Microsoft's OS, hopefully Gateway and Amiga can use this same technique to bring the Amiga into the front line of computer technology. Although it would be great for Amiga to make a next generation Amiga computer, it would cost them more money and time to develop anything which could compete with what is available on the market today.

I hope that all Amiga users will embrace their decision and support them in this challenge to keep our computer alive, now we will see what the Amiga computer can do and I look forward to *Amiga Format*'s review on each new machine that arrives. Good Luck Amiga Inc. & Gateway.

Erol Ismael
eismael@netscape.net

That is certainly a point that hasn't been considered by many people and I hope you're right Erol.

received *Amiga Format* then I would find an installer for the game on one of the cover CDs. Sure enough there was one listed on *AFCD23* which worked a treat. So, instead of taking more money from me I was given some useful advice! Also I have just purchased a bigger hard drive from Select Software (2.1GB) and I was told that if I sent my old 260MB hard drive to them they would partition the new drive and copy all of the data form my old hard drive for a mere £3. So there are other good reliable companies out there.

M J Hawley
via email

MORE ON TUTORIALS

Thanks for the new tutorials, although I am not an absolute beginner I also do not profess to be an expert either, I'm somewhere inbetween. I found them to be very helpful, well explained and easy to understand; excellent. How about putting them on the CD so that we could print the ones we want and then gradually build up out reference book and save you being asked the same questions? I feel by getting a better understanding and helping us to solve some of the things we have problems with it will help us all progress faster. Due to where I live my main source of information is your magazine. One question I would like answered – what happened to the *Napalm* game patch that you mentioned several issues ago – was it ever released? I sent my registration card to clickBOOM and have also sent a letter enquiring what happened to the game patch but have not received a reply. One more comment. How about getting some livelier icons for the CD as I find those black balls very dull and boring. Thanks for a great magazine.

Chris Ball
Cornwall

The Napalm game patch makes this fun-filled game even more playable.

The game patch was released, but is only available to registered users, so we couldn't put it on our CD. However, if you sent in your registration card, you're entitled to it. I take it you don't have Internet access? It may be hard to get if you don't, I'm afraid. As for the icons on our CD, look out for AFCD50 for which we have a new look planned.

PIRATE CD?

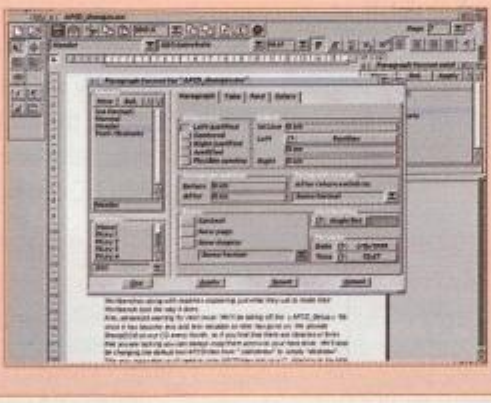
I've just received issue 129 of your great mag and was appalled by the review on page 28 'Gremlin Collection'. What a complete insult to all your readers. For

Continued overleaf ➡

WHERE'S DIGITA?

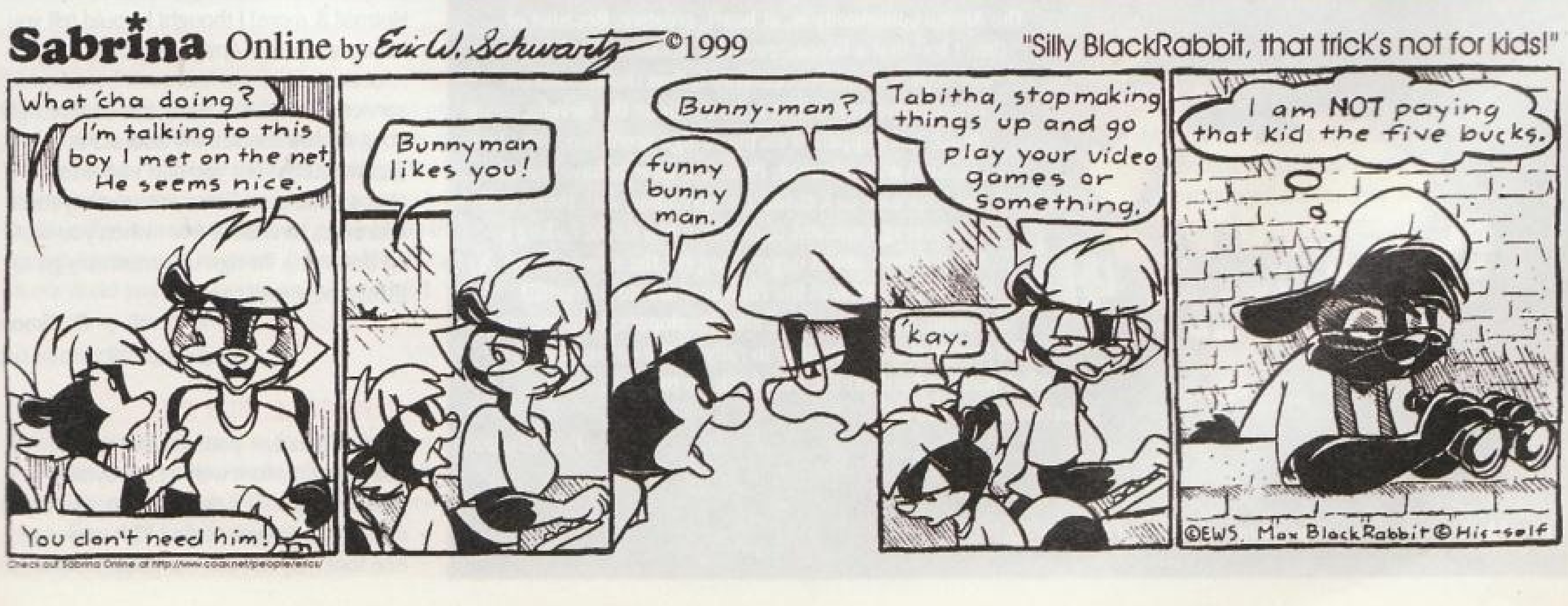
Shock Horror. I telephoned Digita for technical support yesterday (October 11th 1999) only the second time in eight years but discovered they have ditched *Wordworth*. Surely we are not to be still further disadvantaged? I am happy to cough up £30 to £40 every 18 months as my word processor is honed to perfection. Is it possible that the developers will take on the work independently? Could Power Computing buy the license and continue development? HELP. I am stuck with a rather quirky version 7. I am desperate to upgrade and I had hoped for a new release this Christmas along with some hardware. If Digita have abandoned us it does look like software is going to dry up all together. My Amiga is used daily for five hours preparing documents. I have years of files. I am reluctant to change but is this the point where I must bite the bullet? I invested £800 on new hardware last year at Power. But I am beginning to feel very disadvantaged especially when I look at what I can do at school on PC's!!! Your Thoughts? *AF* is a true lifeline for those of us who bought into the Amiga lifestyle and philosophy, keep up the good work. I remain pitifully ignorant about the way the machine works and I do not have the time to learn. So keep those basic tutorials coming… I need them! Regards,

Fred
fred_vintner@thelodge.prestel.co.uk



Is this the end of the line for Wordworth?

It's hard for Digita to justify continued development in the Amiga market when not enough people buy their products, sad but true. However, some good things are promised for Amiga Writer 2, although the first version was very lacklustre, and perhaps that will solve your dilemma, although it would need to be able to import all your Wordworth documents to be worthwhile to you.



Sabrina Online by Eric W. Schwartz ©1999
"Silly BlackRabbit, that trick's not for kids!"
What 'cha doing?
I'm talking to this boy I met on the net. He seems nice.
You don't need him!
Bunnyman likes you!
Bunny-man?
funny bunny man.
Tabitha, stop making things up and go play your video games or something.
'kay.
I am NOT paying that kid the five bucks.
©EWS. Max BlackRabbit © His-self

Check out Sabrina Online at http://www.coax.net/people/erics/

➡ years we've all been told not to pirate software or buy it from dodgy market traders only to be presented with a full two page colour write up on the latest shovelware CD-ROM supplied by Epic Marketing. It's a total disgrace, come on guys don't give this type of product column space in your mag. To add insult to injury in the same issue on page 92 you have printed an interview with Sir Chris Wiles asking for loyal Amiga users not to pirate software!! I've had software stolen and shovelled onto CD-ROMs in the past, it's not big and it's not clever.

phil.wilkinson@eidosnet.co.uk

Epic's CD isn't shovelware. It has a front-end to allow you to play games from the CD, or copy them onto floppy, and a lot of effort has gone into the compilation of the CD. However, the fact that the only versions of the games on the CD that were available to Epic were pirated ones isn't good, and perhaps Epic should have thought more about restricting the selection to the ones that aren't obviously pirated and reducing the price of the CD. What do you think?

RALLYING CALL

Forget Amiga Inc. Long Live Amiga. Don't worry fellow Amigans, the MCC was not a true Amiga anyway. It had a great looking case design but the closest it came to being an Amiga was the name printed on the top. Let Amiga Inc. focus on their doomed business plan of developing net software for high tech kettles and toasters, we don't need them. The BoXeR is nearly here. A true 100 per cent compatible Amiga with optional PowerPC processor support. It has industry standard expansion slots enabling the use of the world's best and cheapest sound and graphic cards etc. This is the Amiga NG that we all want. Rally behind this machine gentlemen and the future of the Amiga computer can once again flourish.

Remember Amiga Inc., without the community behind you, you're worth nothing.

ian@amigan.freeserve.co.uk

TRUE PLUG AND PLAY

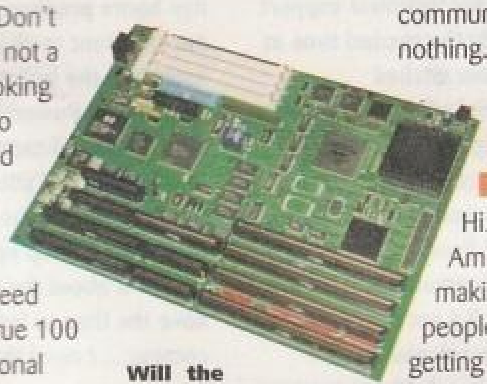
Last week, I passed my local computer shop (once an Amiga outlet, now just PC) and noticed cheap secondhand SVGA monitors for sale. After 10 years of using my TV I decided it was time to upgrade. Naturally, I asked for a demonstration, and the assistant offered to connect it to the PC he had running. After 15 mins of trawling through the settings, calling in the help of two colleagues, four resets and two crashes (this is no exaggeration), a picture finally appeared. "Er, would you like me to write down the procedure for setting up the monitor?" he asked me. "Oh no" I replied smugly, "I'm using an Amiga – I really can just plug it in and play!"

By the time I left, the whole shop was discussing their fond memories of the Amiga, most people had owned one at some point and a couple were using emulators on their PCs.

After the years of promises, previews and presentations, but no production, it is difficult not to be sceptical about a new Amiga ever appearing, but this episode showed me that if anyone can do it, there is an enormous wealth of people willing to be on its side. Keep up the good work.

N Elliott

I hope you did manage to simply plug in the monitor and get it to work. Some of those VGA monitors really are twitchy when it comes to scan rates…



Will the BoXeR boost the flagging spirit of the Amiga market?

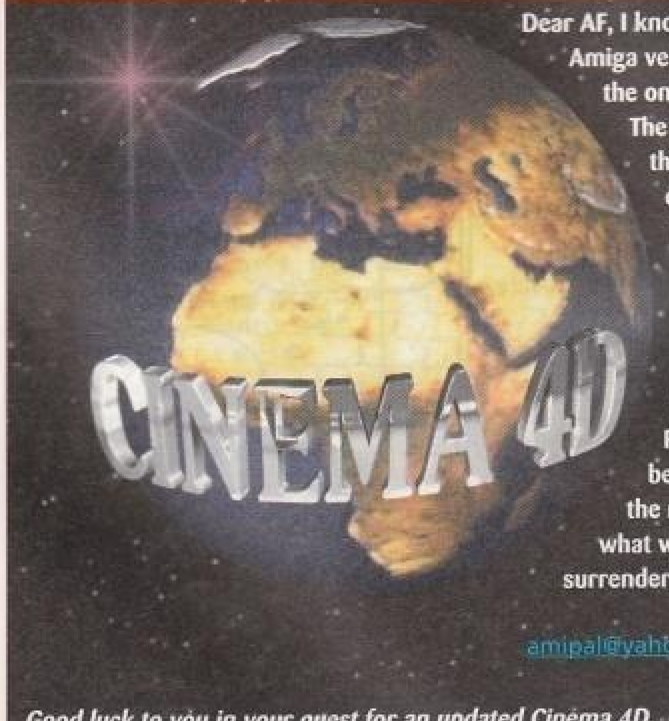
RATS LEAVING A FLOATING SHIP?

Hi. Since the announcement from Amiga that they will no longer be making the MCC, there has been a lot of people saying "Oh, that's it then, I'm getting rid of my Amiga". This doesn't make much sense to me. I figured that the remaining Amiga userbase was made up of those who used the machine because they still liked it. Why would anyone just use the Amiga because the MCC was on the horizon, especially when it was no more an Amiga than a PC running UAE! Personally, I use an Amiga because it does absolutely everything I need in a way I like. Why do you have to "leave" the Amiga just to get a PC/Mac/Linux box/whatever?

Peter Gordon

lumpbucket@yahoo.com

I LIKE THE CINEMA



Dear AF, I know that it has been some time since Maxon dropped the Amiga version of the excellent program *Cinema4D*, but I can't be the only one who has thought of what could come from this. The Amiga community is, at heart, creative. Because of this, I feel that a licence could be obtained for Amiga developers to, not necessarily follow the version on other platforms, but at least continue the development. Much has happened on the Amiga scene since the last version was released: PowerPC boards have become widespread, GFX cards are spreading with them, and the average amount of memory has risen. Failing a licence, how about negotiating for the source code? A PowerPC version of the raytracer would be (sniff!) beautiful. So Amiga users and developers, help me, and the rest of the community, to rally to the cause, and get what was (and still is) the best back up to speed… No surrender, no retreat.

Paul Laycock

amipal@yahoo.com http://www.free4all.co.uk/free9046/index.html

Good luck to you in your quest for an updated Cinema 4D.

ALTERNATIVE PRIZES

Hey Hey. I have been an avid reader for *Amiga Format* for many years and have enjoyed its many changes and additions, one of which is the £50 reader prize. Although a great addition,instead of giving £50 to the reader, why not register some shareware for the reader instead. Not only will this reduce (some) piracy, but will also help the Amiga and would motivate developers to make continual updates to their software. With piracy being a huge issue on the Amiga, registering shareware for those readers may help the current situation.

Also, out of curiosity, would it be possible to put older commercial games onto the coverdisks/CD. Such games as *Speedball 1/2, Last Ninja, Giana Sisters*, any LucasArts adventure, etc. Such games are very addictive and fun and may increase sales of the magazine, attracting customers that may have left the Amiga.

Please remember these are only suggestions and do not have to be fulfilled. I am just trying to help the Amiga. Thanks for your time,

"Skeezy"

<skeezy@death-star.com>

Anyone who wins a reader prize from Amiga Format can always spend it on anything they like, including shareware registrations, commercial software or hardware, or even a subscription to our fair magazine. To force a reader to accept registration of a particular piece of software would be counter-productive. As for old games, we've tried (with F1GP and UFO: Enemy Unknown), but they cost a lot of money for no particular benefit, so it's unlikely we'll run more, sorry.

PLUG TIME

Dear Amiga Format, A while ago I was surfing the net I came across a great email service which had all the features of Hotmail & more! I thought I would tell you because I expect Amiga users are a bit reluctant to use the Microsoft based email service Hotmail. I'm using this service right now! As you can see my address is @europe.com but you don't have to choose that one. There are so many more addresses to choose from when you sign up (for free!). To sign up just simply go to http://www.mail.com

R. Almond

robbiealmond@europe.com

EURO'LL NUTS!

A few issues ago you said that we were going to get a font with a Euro symbol in it, presumably on the cover CD, perhaps you could tell us where to find it? In any case one font may not suit our requirements, so why not do a tutorial on inserting the Euro symbol into any font, using the version of *Typesmith* that we got on *AFCD87*?

Speaking of fonts I notice you have changed most of the text in the magazine to a sans serif style of font, which makes the text a little harder to read, but being the loyal subscriber that I am, I'll just have to nip down the Opticians before the next issue arrives!

When we send a letter in to the "Mailbag" and "Workbench" pages why not print our email addresses, like they do in the Daily Telegraph's Connect Supplement, then others would be in a position to back-up the answers that you or Simon give? This shouldn't be a problem as our email addresses already appear in Reader Ads. Regards,

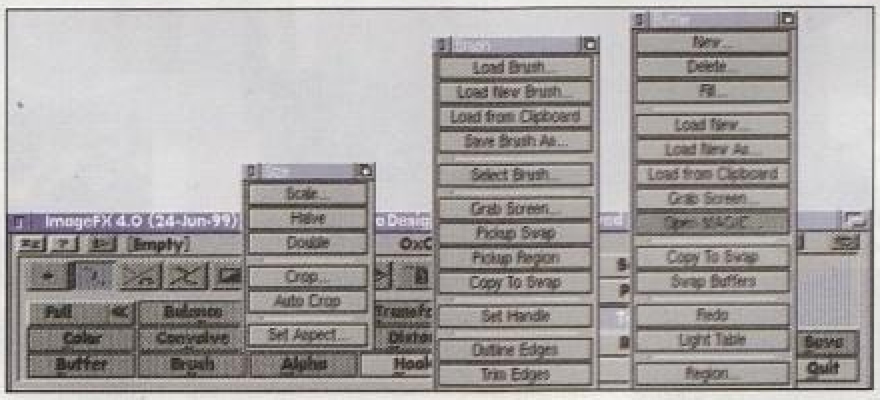
Michael Badger
aflletters@badger.org.uk

The fonts with euro symbols are on our CD, surprisingly enough in the fonts directory. Just copy them across to your fonts drawer and run FixFonts. To get a euro symbol in one of them hit the alt-y combination. Using a bit of software from AF87 may be going back a bit far for some people, but I'm willing to run a tutorial if enough people want it.

IMAGEFX REVIEW LET-DOWN

Hello AF, I'd just like to let you know I'm completely disappointed by your review of *ImageFX 4.0* (*AF 129*). If Mr Vost had spent some more time to read the manuals he would have seen that THERE IS a magic wand tool in *ImageFX*. You just select the flood mask tool. You can even set the tolerance through the bucket-tool threshold settings… What's more he said that *ImageFX* has not updated its interface. Since version 3.0 the whole GUI met a major overhaul and, although I'm used to the likes of *DPaint* and *Photoshop*, it has a light learning curve in my opinion. You want menus? Why? You don't like buttons or what? I think it saves a lot of hassle this way. I agree that it's a bit awkward to open a filerequester for some of the newest plugins and I agree that the software has still bugs left in it, but 69%?!? And since when was a small bug like the constantly active appearing windows considered a cardinal GUI sin? Confusing yes, but cardinal? And, unless I live in another world, lens flares, fire and lightning ARE some of the effects that will be used all the time! As for the incomplete animation features I have to agree up to a point, but then again it's just the beginning. Nova has proved that any glitches found will be fixed with patches. Now wouldn't it be nice (and considering that it's the last Amiga killer application along with *PageStream*) to rate a program after you have worked with it for a decent amount of time? No offense meant!

BKJ
Vulture@freemail.gr



The official word from the Vatican is that it is a sin to have all windows highlighted...sorry.

I've worked with ImageFX since version 1, and since I've been reviewing it (version 2.6) I've been giving it increasingly lower scores because of the fact that it has been getting more and more awkward to use for a newcomer, while the new effects have become more and more marginal. A better approach would have been to overhaul the interface again, but bring it up to date, rather than simply add the animation facilities to the program. If you look at our scoring policy at the back of the magazine, you'll see why I had to give it the score I did, rather than a higher one. I know about the ImageFX version of the magic wand, but it still remains that I couldn't do what I wanted with it. I look forward to every new version of ImageFX with baited breath, but I'm afraid I couldn't have justified the £75 upgrade fee if I'd had to pay it myself.

NOT ON THE STREET

With all the talk about new Amiga machines appearing in the near future I was somewhat disappointed when visiting my local Electronic Boutique to find their shelves had been cleared of Amiga software.

Obviously this is due to poor sales and the fact that the Amiga has become somewhat of a dinosaur in High Street outlets. Another point is local supermarkets that used to sell *Amiga Format* ie Asda and Sainsburys no longer stock the mag on their shelves, fortunately WHSmiths still do.

I think the point I am trying to make is that if Amiga are going to sell the new machine it will have to be heavily advertised and well marketed to convince retail outlets that this a viable proposition and the hardware and software back up will be of the highest quality. If this is not the case but just a half hearted affair I feel a wonderful era may be coming to an end.

The Amiga has been a credit to the computing world and a survivor due to its community of followers, so hopefully their loyalty will be rewarded by the new machine being backed to the hilt by its parent companies. What does *Amiga Format* feel about this subject?

Brian McLeod
brianmac@cableinet.co.uk

The wonderful era you mention won't ever come to an end as long as you use the machine actively, regardless of what some High Street chains do or don't stock. If EB are getting rid of their limited Amiga range it's probably because they aren't buying the right stock from the right company. As anyone who reads AF knows, there's a much wider range of games available for the Amiga than has ever been stocked in Electronics Boutique, but because they'll only buy from one supplier who has a stock of old Microprose games, they'll never see the light of day in a High Street shop. However, there's little point EB trying to get these new games if no-one buys them.

Ben Vost

PD DRYING UP?

Hi Ben, Great mag… just a few points to make about the current miggy situation.

1 Amiga really need to get their arse(s) in gear. With so many U-turns recently, it is easy to understand people leaving the platform. I almost left myself, but then I thought, hey! I'm not just gonna line Bill Gates' pockets with more dollar bills.

2 I love PD, the PD market is one of the reasons I chose the Amiga. But, the market is dangerously close to drying up. So, all you PD lovers out there, please register shareware, even if you register only one title, it will (possibly) make the author think twice about that shiny new Wintel box.

Keep up the good work.

Matt King
13198@oakham.rutland.sch.uk

I know this probably won't help you at all Matt, still being at school and all, but I'm convinced that if more Amiga shareware authors made their wares easier to buy online with a credit card they'd get far more registrations, leading to more development, and so on. I recently bought a Palm Pilot (based on the feature in this issue) and the shareware available for it is great. Best of all, you can buy any of it you like over the net with a credit or debit card and you'll get the registration key in your email client within minutes. Right now, the best example of this that the Amiga can offer is the exemplary Vapor website which does much the same for Voyager, Genesis and so on, or the Nordic Global site for Miami, but these are only two examples, and only for net software. Shareware authors! Make your software easier to register!

GAME PERFECTION

Hi, The feature you are doing at the moment on program perfection is good but I was wondering if you could possibly do a feature on how to program a game using Blitz Basic. I got the program to program so I could send a game into readers game as I believe that it is one of the best parts of the magazine as it shows what the Amiga and its users are capable of. So if it is possible, please could you do a re-run on the tutorials?

Keep up the good work.

Lee.Moss@tesco.net p.s
Suffok

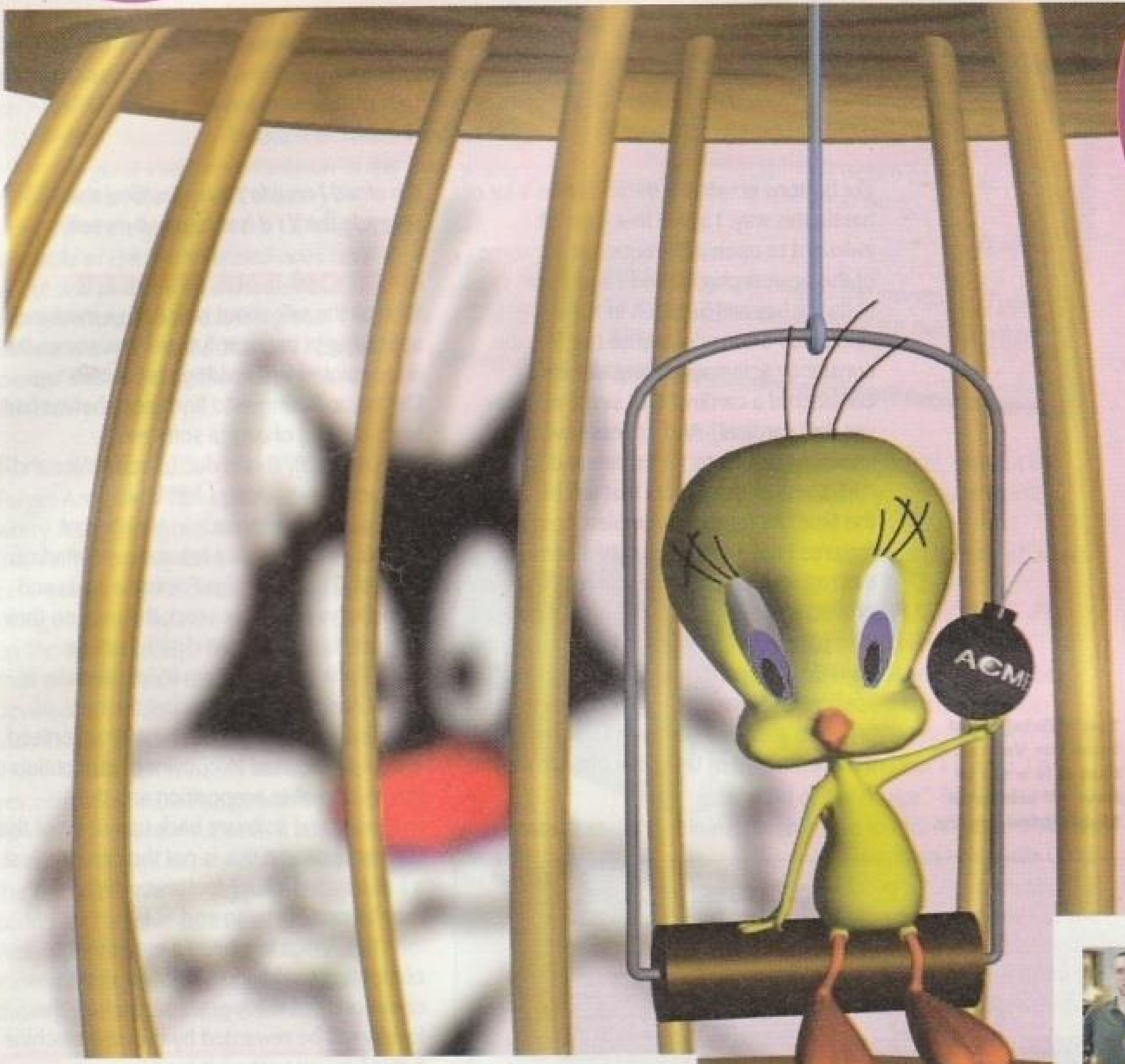
Rich's tutorial is designed to be generic, so you can apply his principles in any programming language. A tutorial specific to games programming in Blitz might be a touch too specific, but, again, if enough people want it, we'll do it.

The Gallery

On the -ReaderStuff-/-Gallery- CD

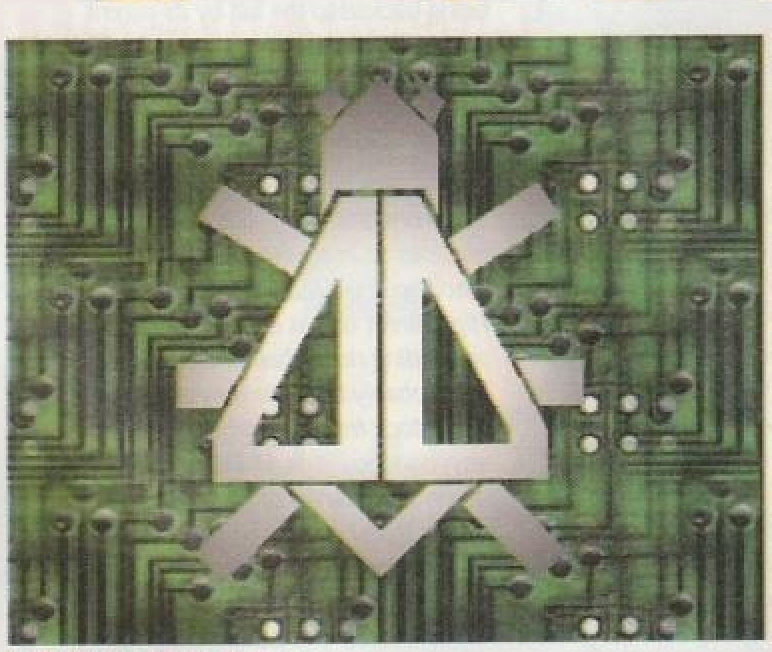
Another selection of your original artwork adds colour to the pages of *AF*…

Sponsored by Amiga £50 WINNER!



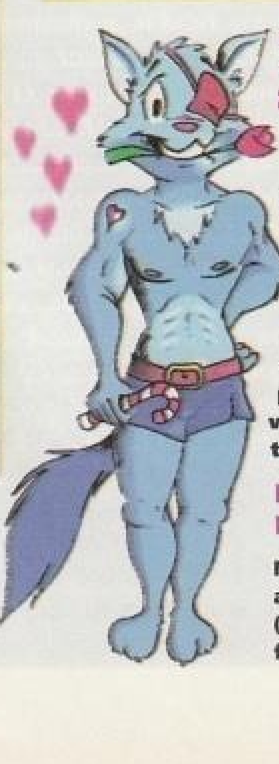
Tweety by Mark Harrison

Mark's 3D Tweety definitely deserves the reader prize this issue. We specifically like the out-of-focus Sylvester waiting to pounce and the superb modelling for Tweety.



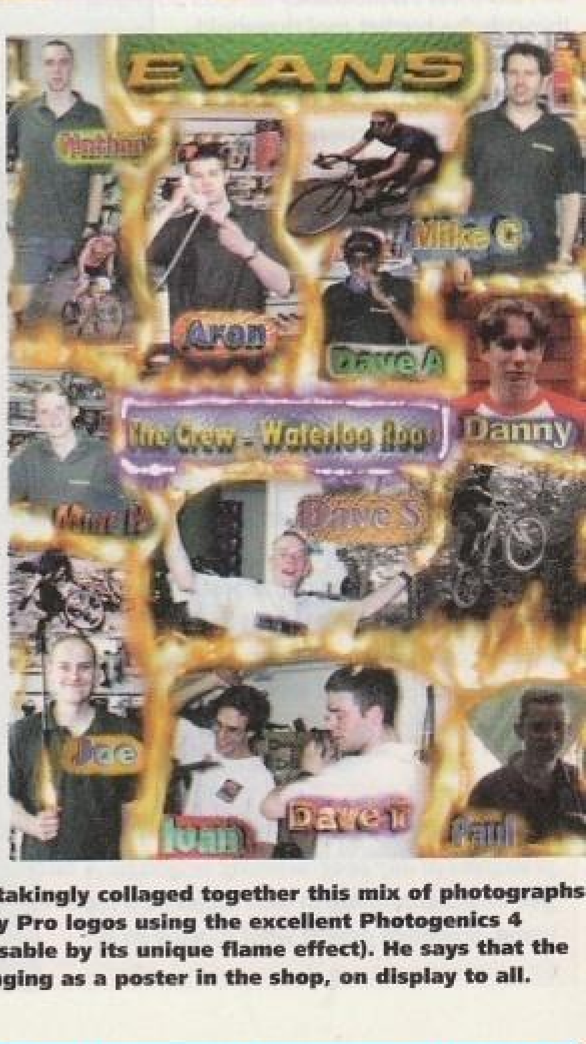
Alf Fly by Chris Spicer

Chris is a big fan of the Designers Republic – the design team who gave PWEI a futuristic image and worked on all the WipEout releases. His design may be small (we'd like a bigger one next time, Chris), but designed to be simple and easily reproducible.



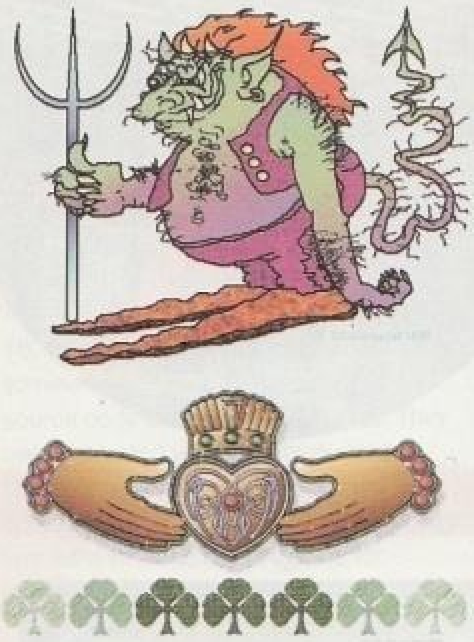
wolfcat by Raymond Zachariasse

Raymond's work is a little too reminiscent of Eric Schwartz's so perhaps not worthy of a gallery prize, but is very good all the same.



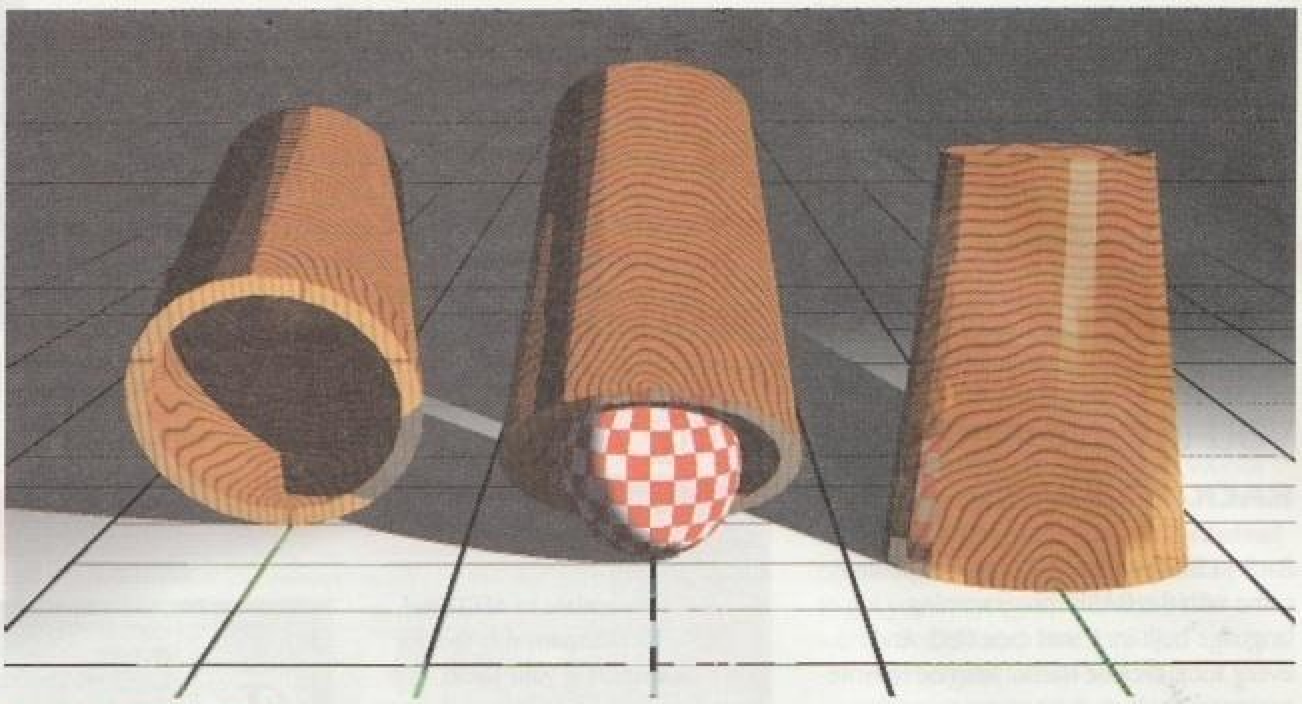
Evans by Nathan Berry

Nathan has painstakingly collaged together this mix of photographs and Candy Factory Pro logos using the excellent Photogenics 4 (instantly recognisable by its unique flame effect). He says that the final image is hanging as a poster in the shop, on display to all.



1st Green Demon
Claddagh
by Vivian McAlexander

Vivian once sent me a three dollar bill, and her sense of humour is evident in her troll pictures on the CD, while her Claddagh picture is nicely detailed.

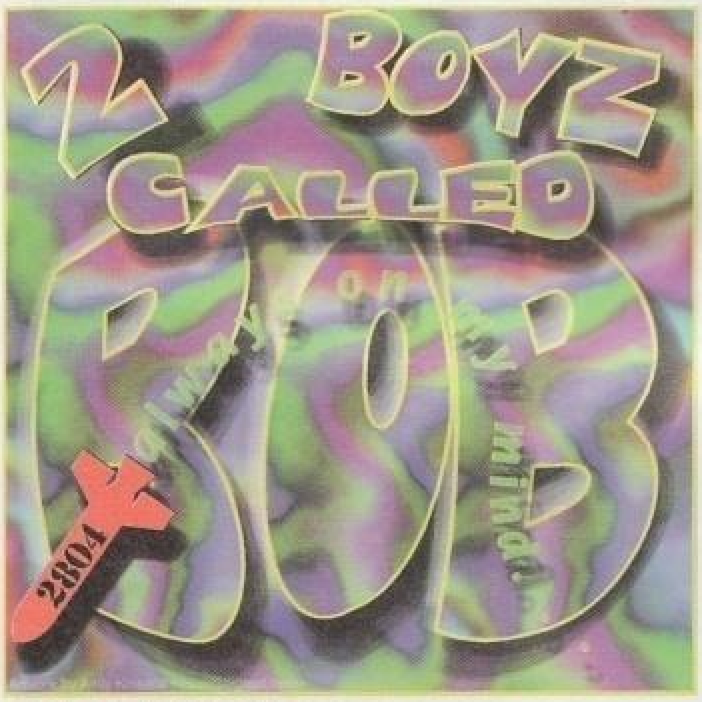


Cups by Ragnar Fyri

Ragnar wants to make a computer version of the shell game, but since he doesn't program, has decided to start with the graphics. If anyone can help him out I'm sure he'd appreciate it, as he'd appreciate a faster processor since this image took more than 13 hours to render on his mere 020!

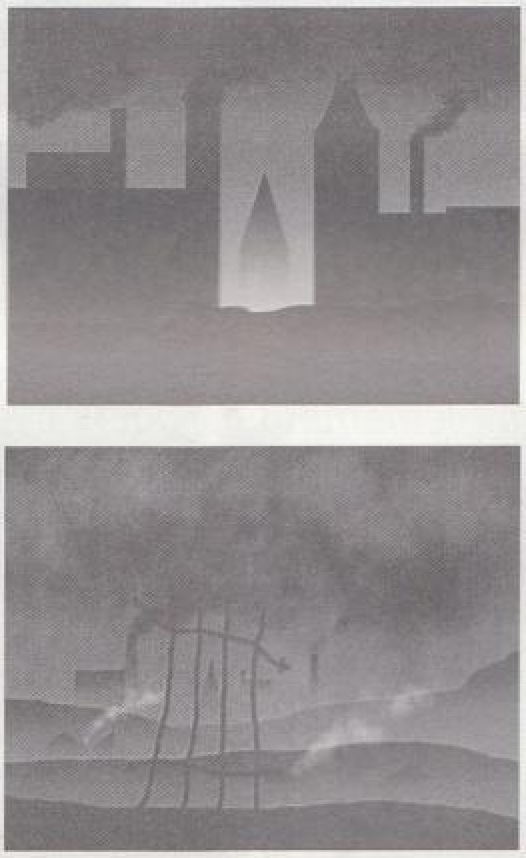
CONTRIBUTIONS

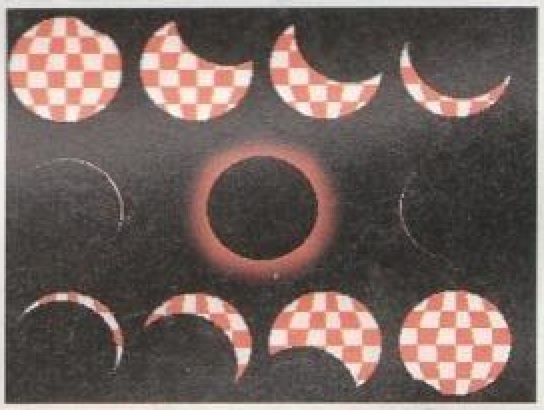
If you'd like to enter your work (and it should be only your work!) for the Gallery section on the CD and the pages in *Amiga Format*, read the Reader Submissions advice on the CD (you can find it in various places) or simply make use of the form that can be found on the CD pages of this issue.



bob by Andy Kinsella

A welcome return to the Gallery pages for Mr Kinsella, but not in 3D. A choonsmith asked him for a CD cover, so he knocked up this little number in DrawStudio rather than his trademark Imagine.



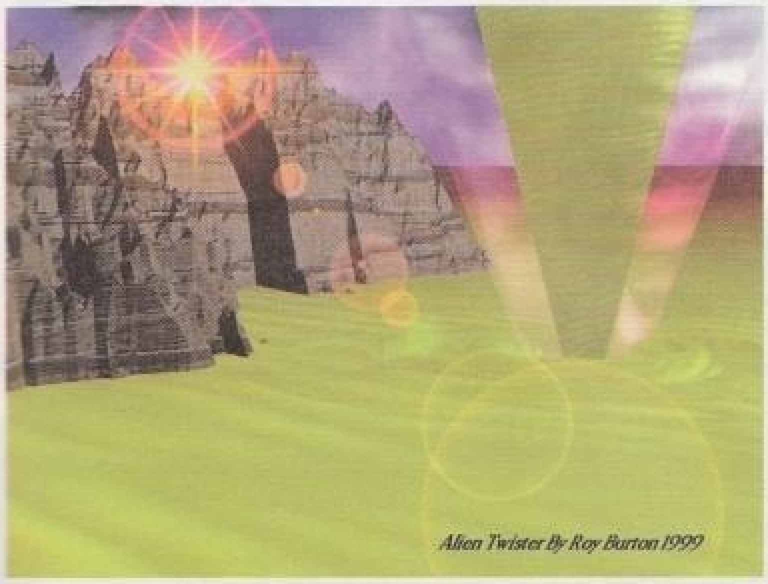


Eclipse by Michael Morley

Inspired by the event on the August 11th, Michael decided to put an Amiga twist on it and go for that boing ball look. However, it would have looked better if you'd drawn the ball at the same resolution as the rest of the image Michael, and I'd get that CD-ROM drive now instead of waiting for another machine...

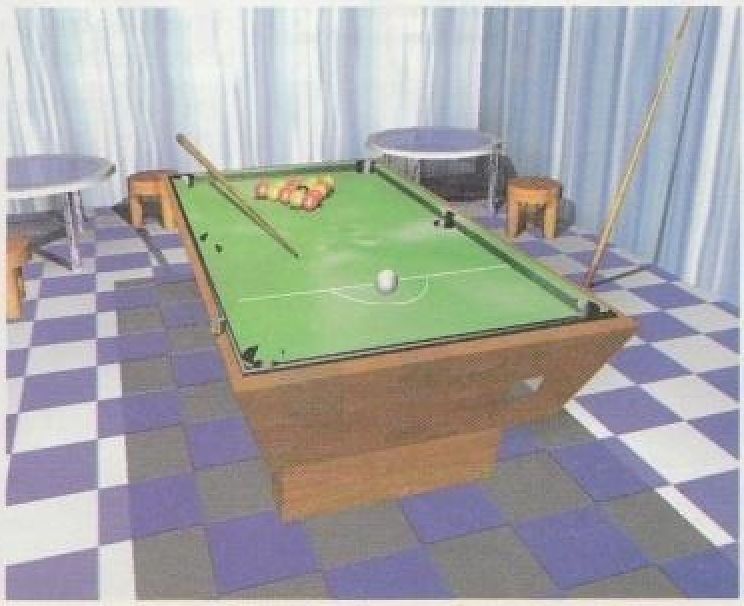
Factories & Railings by Paul Williams

Inspired by the work of local artist Trevor Grimshaw, Paul created these moody pictures in a mixture of DPaint, PPaint and Photogenics. Although they are dark, the texture is wonderfully like really heavy laid paper.



AlienTwister by Roy Burton

Roy's work in Cinema 4D is really getting there. His twister needs a bit more work to make it look more natural (try deforming it somewhat like you did the letters in one of your other pictures), but overall it's great.



You get the beer and I'll rack 'em up by Steve Hargreaves

Steve's picture is a dimensional accurate representation of the pool table in his local, and although Steve's happy with his baize texture I'd say it needs a little more work. Remember that baize isn't reflective Steve, and I think that your image would look a little more realistic, but other than that it's another good effort in Cinema 4D.

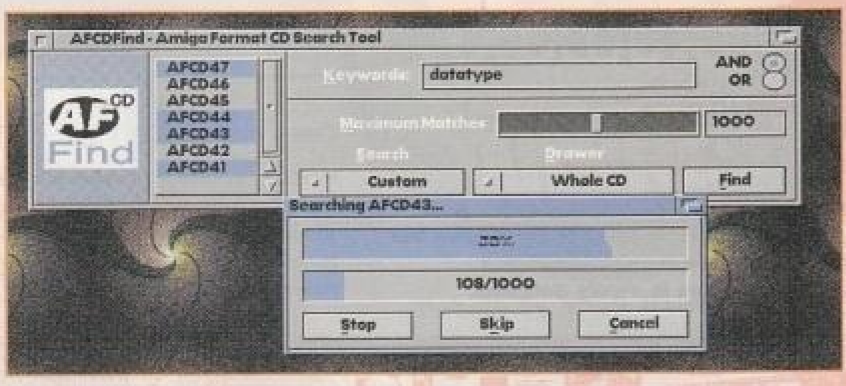
AFCD 47

AMIGA FORMAT
Forty Seven
47
Made in U.K.

Just in case you get snowed in this Christmas, we've packed our coverdisc with loads of goodies to keep you entertained until Spring

WHAT'S NEW

A new update to AFCDFind, the indispensable tool for searching your back catalogue of *Amiga Format* coverdiscs, graces this issue. The latest addition allows greater control over which CDs are searched. If you select Custom as the search target with the cycle gadget, then you may select, in the list to the left, which of the CDs you want to include in the search.


AFCDFind - Amiga Format CD Search Tool
AF CD Find
AFCD47
AFCD46
AFCD45
AFCD44
AFCD43
AFCD42
AFCD41
Keywords
datatype
AND
OR
Maximum Matches
1000
Search
Custom
Drawer
Whole CD
Find
Searching AFCD43...
10%
108/1000
Stop
Skip
Cancel

AFCDFind is not just there for the nasty things in life.

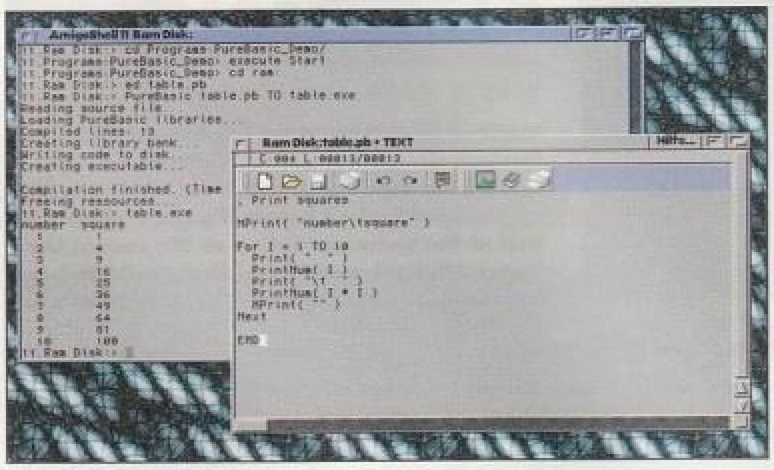
BACK TO BASICS

-Serious-/Programming/BASIC/

Back in the '80s, every home computer came with the BASIC programming language built-in. It was expected. And every Tom, Dick or Harriet learned to write programs for their 8-bit micro using this language. This was expected, too: if you knew about computers, you knew BASIC. In these enlightened days of multimedia and graphical interfaces, nobody can be bothered with writing their own software and so the language has fallen out of favour. This is a shame, because, despite its faults, BASIC remains an accessible way for the novice to get to grips with programming.

Even if Amigas were still being built today, they haven't included BASIC since Workbench 1.3 was around. Commodore quite rightly dropped the atrocious implementation of BASIC that they shipped previously with their machines. Unfortunately, it's replacement, ARexx, while being infinitely more powerful and flexible than your average BASIC was considered to require more specialist knowledge. The question, then, is how is the beginner supposed to learn to program their Amiga. Diving headlong into C takes some courage and many of the third-party versions of BASIC still in existence for the Amiga leave a lot to be desired.

Pure BASIC is simple to learn because it is based on traditional BASIC implementations, but has advanced features for the more experienced


AmigaShell 11 Ram Disk:
Ram Disk:table.pb • TEXT
C:004 L:00013/00013

```
11.Ram Disk:> cd Programs:PureBasic_Demo/
11.Programs:PureBasic_Demo> execute Start
11.Programs:PureBasic_Demo> cd ram:
11.Ram Disk:> ed table.pb
11.Ram Disk:> PureBasic table.pb TO table.exe
Reading source file...
Loading PureBasic libraries...
Compiled lines: 13
Creating library bank...
Writing code to disk...
Creating executable...

Compilation finished. (Time
Freeing ressources...
11.Ram Disk:> table.exe
number  square
  1       1
  2       4
  3       9
  4       16
  5       25
  6       36
  7       49
  8       64
  9       81
  10      100
11.Ram Disk:>
```

```
; Print squares

NPrint( "number\tsquare" )

For I = 1 TO 10
  Print( "   " )
  PrintNum( I )
  Print( "\t   " )
  PrintNum( I * I )
  NPrint( "" )
Next

END
```

Our example program in action.

Listing: table.pb

```
; Print squares

NPrint( "number\tsquare" )

For I = 1 TO 10
    Print( "   " )
    PrintNum( I )
    Print( "\t   " )
    PrintNum( I * I )
    NPrint( "" )
Next

END
```

Pure BASIC is a new version of the BASIC programming language for the Amiga. It is simple to learn because it is based on traditional BASIC implementations, but has many advanced features for the more experienced programmer. It supports the Amiga operating system in a fully legal manner. Pure BASIC is a BASIC compiler; traditional versions of the language are interpreted. The difference is that an interpreted language is converted into instructions that a computer understands line-by-line as the program is running. A compiled program is converted in one go into machine language before execution.

FIRST STEPS

The demo of Pure BASIC provided on the coverdisc may be used directly from the CD, but it is a better idea to install it on your hard disk. This is a simple matter of copying the entire drawer over to wherever you want it to live.

At the moment, the compiler does not have a graphical interface: it must be used from the shell. Newcomers to the shell should first turn to our tutorial on page 54. The program needs an assign made to its drawer before use and the drawer added to the system path. This can be performed with a script provided. For example, if you installed the package to a drive called DH0:, then open up a shell window and enter:

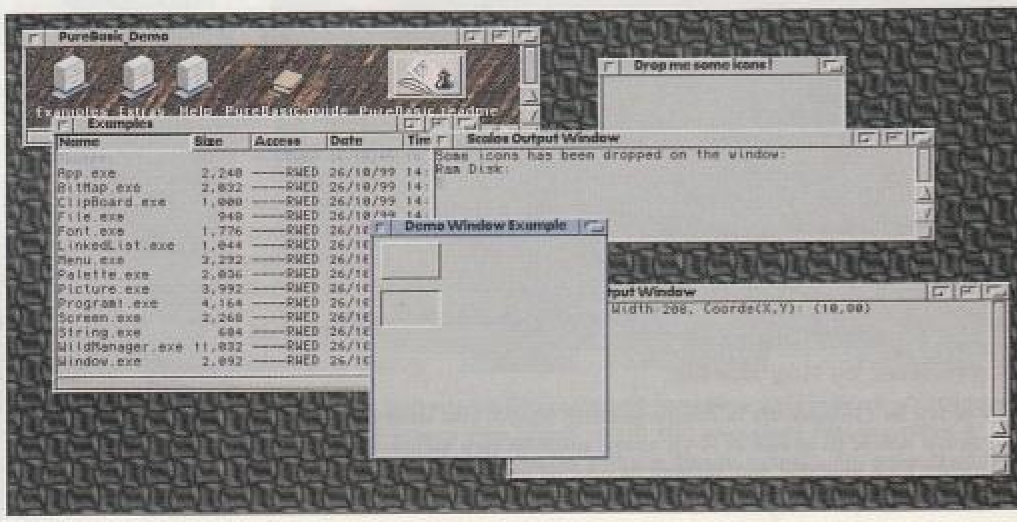
```
CD DH0:
```

and then

```
Execute Start
```

You are now ready to go.

As a simple example, we are going to create the program given in Listing. It just prints the squares of the numbers one to


PureBasic_Demo
Examples
Extras
Help
PureBasic.guide
PureBasic.readme
Examples
Name
Size
Access
Date
Tim
Drop me some icons!
Scalos Output Window
Demo Window Example
Output Window

```
App.exe           2,240 ----RWED 26/10/99 14:
BitMap.exe        2,032 ----RWED 26/10/99 14:
ClipBoard.exe     1,000 ----RWED 26/10/99 14:
File.exe            940 ----RWED 26/10/99 14:
Font.exe          1,776 ----RWED 26/1
LinkedList.exe    1,044 ----RWED 26/1
Menu.exe          3,292 ----RWED 26/1
Palette.exe       2,036 ----RWED 26/1
Picture.exe       3,992 ----RWED 26/1
Program1.exe      4,164 ----RWED 26/1
Screen.exe        2,268 ----RWED 26/1
String.exe          604 ----RWED 26/1
WildManager.exe  11,032 ----RWED 26/1
Window.exe        2,092 ----RWED 26/1
```

```
Some icons has been dropped on the window:
Ram Disk:
```

```
Width 208, Coords(X,Y): (10,00)
```

Pure BASIC has great support for AmigaOS, as many of the supplied demos show.

REGISTRATION

This is a demo version of Pure BASIC only and has a number of restrictions. Firstly, the size of a source file is limited to 2,000 lines. Also, the only external modules that are usable are the taglist, wbstartup, misc, linked list, window and screen libraries.

Details about how to obtain the full version of Pure BASIC are supplied on the coverdisc.

10. Fairly pointless, but you have to start somewhere. Pure BASIC programs or source code are just plain text files. They can be created with your favourite text editor or even the standard AmigaOS editor, ED. First go to the directory where you want to make the program, for example,

```
CD RAM:
```

Then, use ED to enter the program. ED can be called with:

```
ED table.pb
```

Now enter the listing as displayed in the box and then select Save and then Quit in ED. You will be taken back to the shell window.

This source code must now be compiled into the executable program. This can be performed with the line:

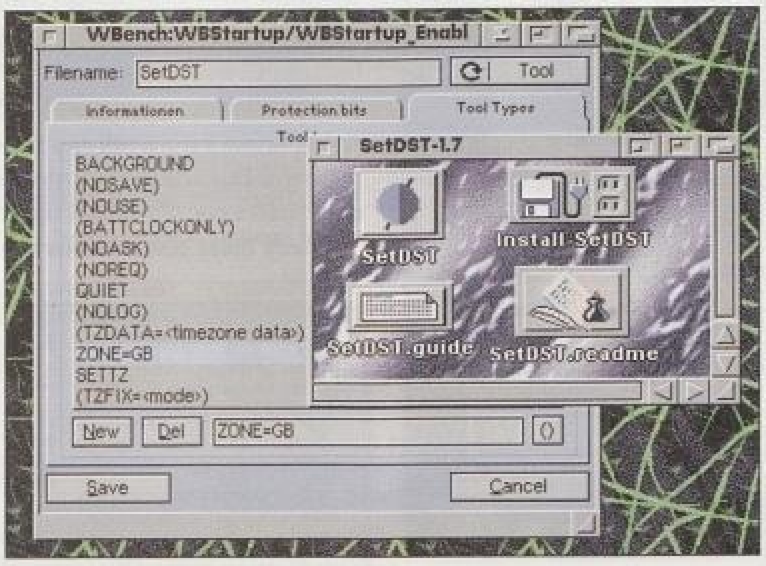
```
PureBasic table.pb TO table.exe
```

Here, `table.pb` is the name of the source file, while `table.exe` is the name of the program to generate. You can run this program to test it by just entering its name into a shell:

```
table.exe
```

More example programs are supplied on the coverdisc with the Pure BASIC, although many of these will not work with the restricted demo version of the compiler. Further information can be found in the documentation provided.

Unless you know when you are, you don't know who you are... SetDST.



```
BACKGROUND
(NOSAVE)
(NOUSE)
(BATTCLOCKONLY)
(NOASK)
(NOREQ)
QUIET
(NOLOG)
(TZDATA=<timezone data>)
ZONE=GB
SETTZ
(TZFIX=<mode>)
```

ZONE=GB

ABOUT TIME

-Serious-/Comms/Other/timelord

-Serious-/WB/SetDST-1.7

If you have your Amiga connected to the Internet, you should make sure it knows the correct time to avoid temporal confusion. This is not actually as simple as it sounds because AmigaOS lacks the facilities to do the job fully. But never fear, *Amiga Format* provides you with two complementary tools to get you in sync with the rest of the world: *SetDST* and *TimeLord.*

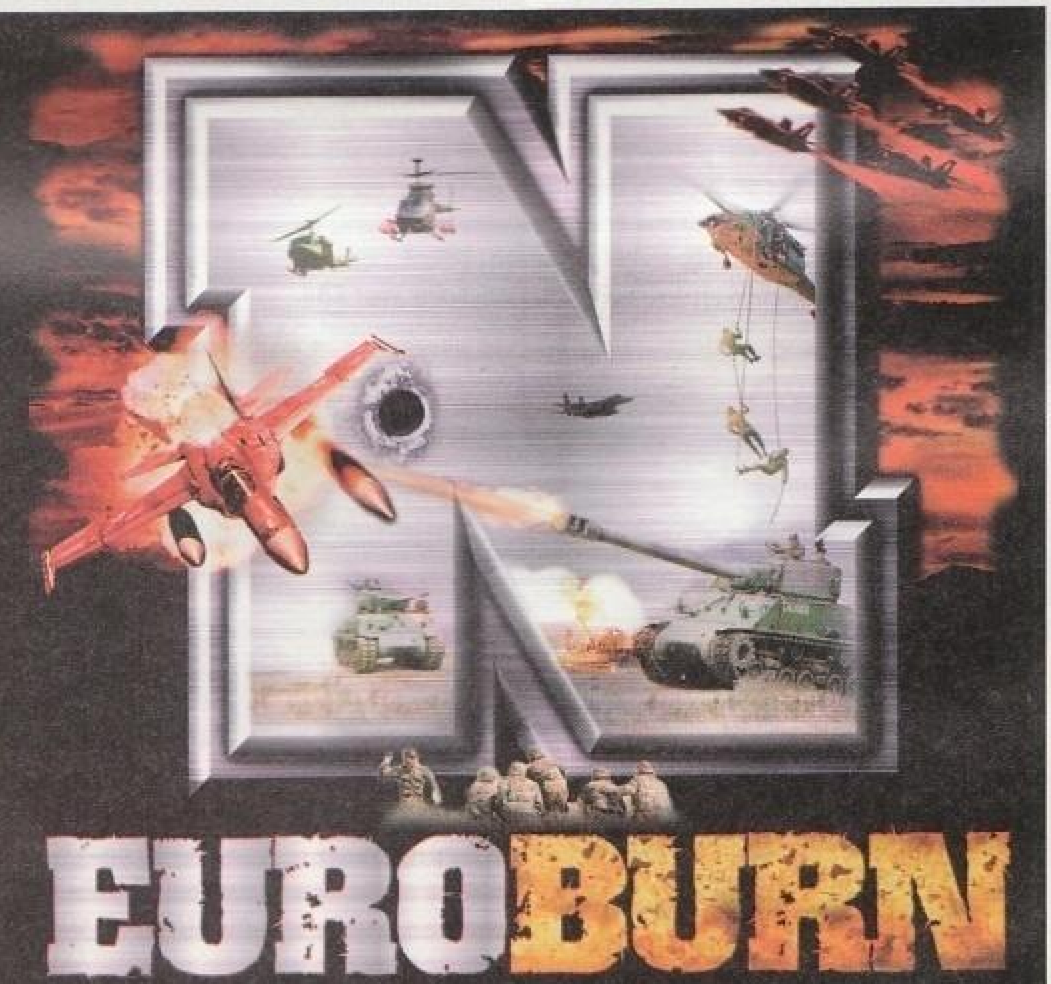
An Amiga's battery-backed clock is generally set to whatever the local time is. This is fine if your machine isn't networked or is only connected to other local machines. The Internet is a global phenomenon, however; computers jacked into the net synchronise by UTC or Coordinated Universal Time, the Anglo-phobes equivalent of Greenwich Mean Time. For your Amiga to join in

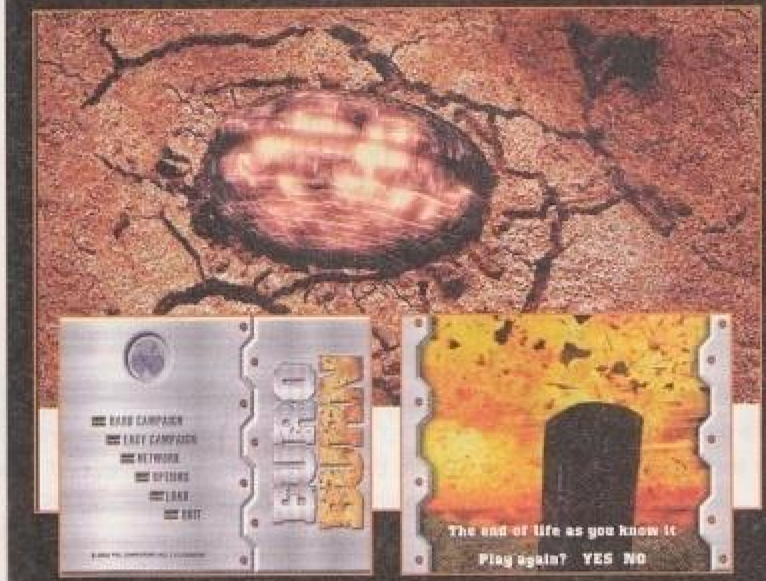
Continued overleaf ➡

EUROBURN

-Screenplay-/-Commercial-/Euroburn

Canadian game developers clickBOOM and planning to reprise the success of their hit *Napalm* with its sequel *EuroBurn.* The exact nature of the game is yet unknown as clickBOOM are being jealously secretive of their new baby. As a teaser they have given *Amiga Format* a movie trailer of the game, and by the looks of it, the game promises to be another smasher. As their last few releases have shown, clickBOOM have a keen eye for detail and production quality. Keep the webpage http://www.clickboom.com/euroburn under close scrutiny for the latest news.



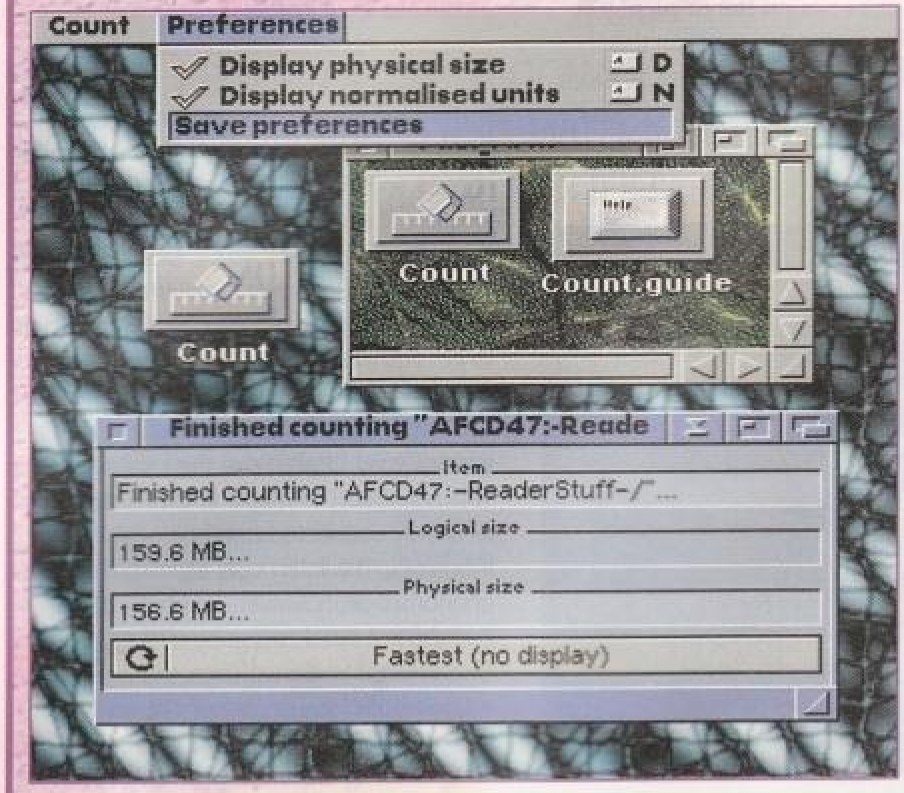


INFINITE MAYHEM

Turn up the volume, grab the popcorn, sit back and watch Europe go up in flames. No great loss.

Your Stuff!

Sponsored by Amiga
£50
WINNER!


Count
Preferences
✓ Display physical size D
✓ Display normalised units N
Save preferences
Count
Count.guide
Count

Finished counting "AFCD47:-Reade

Item
Finished counting "AFCD47:-ReaderStuff-/"...

Logical size
159.6 MB...

Physical size
156.6 MB...

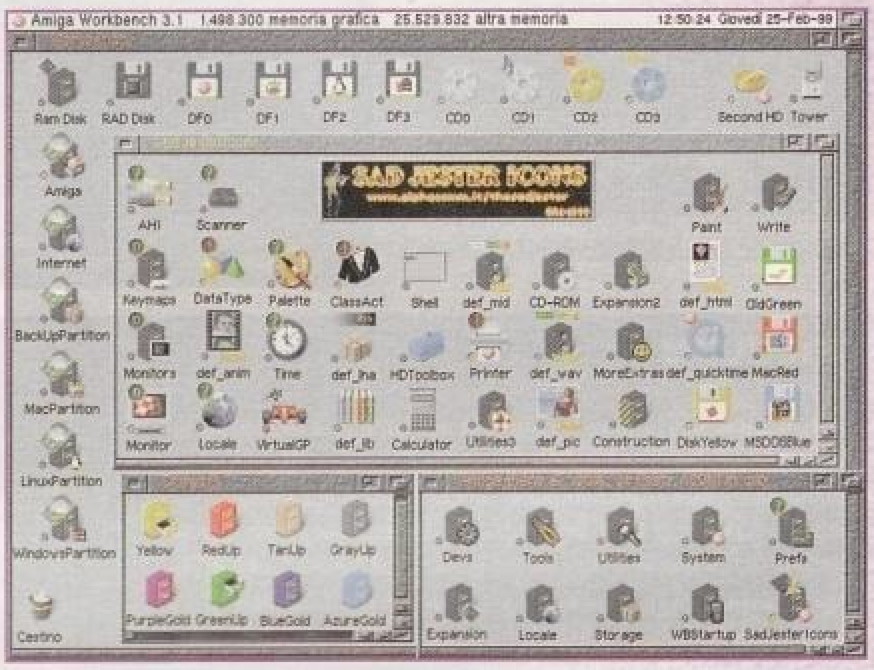
Fastest (no display)

Count contradicts the adage that size ain't everything.

This issue's winner of the prize for the best reader contribution is Paul Frith for his program *Count*, a simple yet elegant utility for telling you the real size of objects on disk. *Count* puts an AppIcon onto your desktop. Dropping an icon on this will pop up a window informing you of the actual size of the corresponding file or directory (by actual size I mean the amount of space it takes up on disk). For volumes and drawers, *Count* will recurse through any nested drawers and calculate the size of the entire contents. *Count* is uncomplicated and well-executed. Great work, Paul. Enjoy your £50.

Another interesting entry this issue is from Bruno Vaccaro who has supplied us with his collection of system icons, called, curiously, *Sad Jester Icons*. These are realised in the *NewIcons* format, so you'll need the *NewIcons* system installed to view these icons. The icon images also borrow visually from Matt Chaput's *GlowIcons* (as used in OS3.5) and the complete set comes in various styles. Bruno's work will allow users to bring a bit more individuality to their desktops. This and Bruno's obviously excellent taste in music ("Sometimes, even jesters cry…") almost tipped the reader prize in his direction.

Keep those contributions coming, everybody.

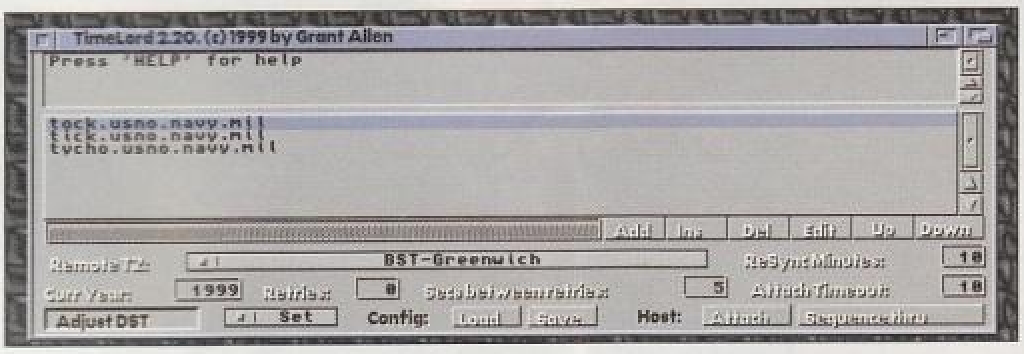

Amiga Workbench 3.1 1.498.300 memoria grafica 25.529.832 altra memoria 12:50:24 Giovedì 25-Feb-99
Ram Disk
RAD Disk
DF0
DF1
DF2
DF3
CD0
CD1
CD2
CD3
Second HD
Tower
SAD JESTER ICONS
Amiga
Internet
BackUpPartition
MacPartition
LinuxPartition
WindowsPartition
Cestino
AHI
Scanner
Paint
Write
Keymaps
DataType
Palette
ClassAct
Shell
def_mid
CD-ROM
Expansion2
def_html
OldGreen
Monitors
def_anim
Time
def_lha
HDToolbox
Printer
def_wav
MoreExtras
def_quicktime
MacRed
Monitor
Locale
VirtualGP
def_lib
Calculator
Utilities3
def_pic
Construction
DiskYellow
MSDOSBlue
Yellow
RedUp
TanUp
GrayUp
PurpleGold
GreenUp
BlueGold
AzureGold
Devs
Tools
Utilities
System
Prefs
Expansion
Locale
Storage
WBStartup
SadJesterIcons

Bored of your old icons? Then try new, improved Sad Jester icons.

properly, it has to be able to work out UTC from the current local time. To do this it needs to know what time zone it's located in and if Daylight Saving Time (DST) is in effect.

SetDST can calculate whether Daylight Savings Time is in effect or not from the current local time and time zone and can adjust your system clock and various other settings accordingly. Installation of *SetDST* is performed simply with the script provided. Before you launch the program, however, you should first make sure that your clock is set to the correct local time and tell it the time zone that you're in via the ZONE Tool Types (for instance, GB for those that live in the UK).

There are many different standards in use to calculate UTC by the various third-party applications that need to know it – usually a particular environment variable. *SetDST* can set most commonly used variables for you automatically: TZONE, TZ and YAM_TZ. This last, for example, is used by *YAM* and ensures that all your emails get the correct date and time stamp.


TimeLord 2.20. (c) 1999 by Grant Allen
Add
Ins
Del
Edit
Up
Down
Adjust DST
Set
Config:
Load
Save
Host:
Attach
Sequence thru

```
Press 'HELP' for help

tock.usno.navy.mil
tick.usno.navy.mil
tycho.usno.navy.mil
```

Remote TZ: BST-Greenwich
ReSync Minutes: 10
Curr Year: 1999
Retries: 0
Secs between retries: 5
Attach Timeout: 10

Take control of time with TimeLord. So, where's K9, then?

If you install *SetDST* to your WBStartUp drawer it will check and update its settings each time you boot your machine. It also features a daemon mode – which you can enable by setting the BACKGROUND Tool Type. It will then run in the background and periodically re-check its settings. This ensures that your DST settings are always correct even if you leave your machine up and running for days at a time.

> TimeLord has nothing to do with occupants of the planet Gallifrey, but in fact synchronises your computer's clock with Internet time servers

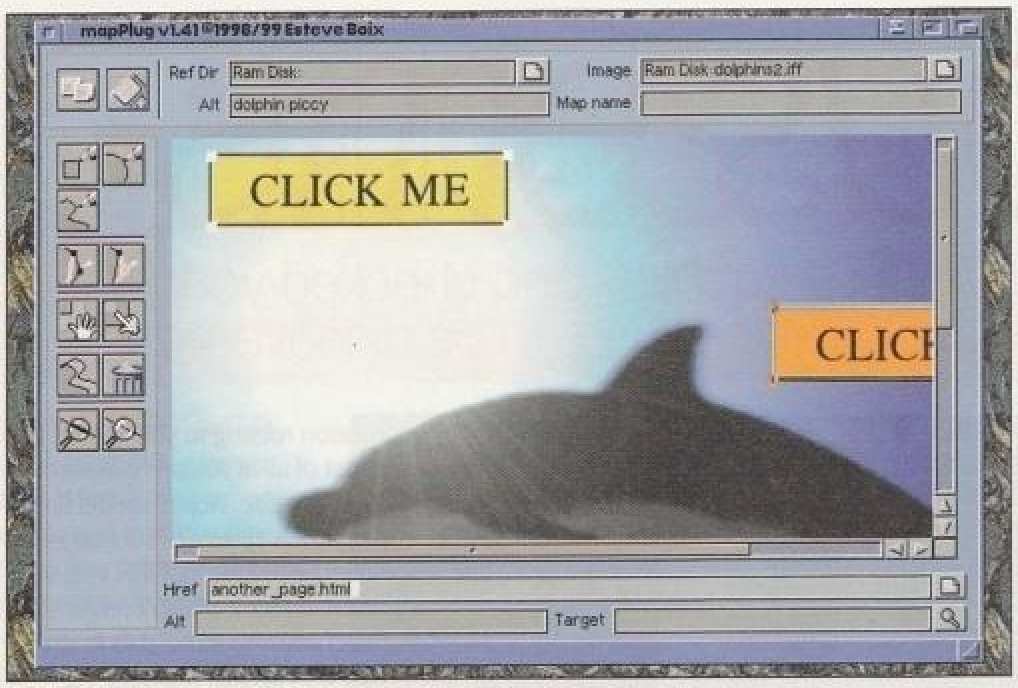
Once your computer knows when and where it's located, the other problem is making sure its clock keeps the right time; battery backed-clocks are prone to losing it. Rather than having to periodically reset the clock yourself, if your machine is connected to the Internet, the program *TimeLord* can do the work for you.

TimeLord has nothing to do with occupants of the planet Gallifrey, but in fact synchronises your computer's clock with Internet time servers – remote computers whose job it is to always know the correct time. Again, *TimeLord* can run in the background as a daemon and can be set to check your clock periodically with the server. To be able to do its job, *TimeLord* needs to know the local time zone and DST setting, so it is crucial to run it in conjunction with a program like *SetDST*.

EASY HTML

-Serious-/Comms/WWW/tablePlug10
-Serious-/Comms/WWW/mapplug14

As computer languages go HTML, the HyperText MarkUp Language, used for laying out web pages, must rank at the bottom of the pile in terms of elegance. All the more reason to get your computer to help out when creating your website. Two programs which can make life easier are *tablePlug* and *mapPlug* which provided point-and-click interfaces for the creation of



Ref Dir: Ram Disk:
Image: Ram Disk:dolphins2.iff
Alt: dolphin piccy
Href: another_page.html

Computers are labour saving, right? Let mapPlug handle those tedious image maps.

two of the trickier elements in HTML, tables and image maps, respectively.

Tables are probably familiar to you already and are a powerful device not just to be used for ordering data but for controlling the layout of your pages. Image maps, however, are less common but can be visually attractive if used properly. An image map allows you to place an image on your page and select regions of this image to be clickable links. It is a finicky process to get right, so a package such as *mapPlug* is a real boon.

Both programs are shareware with a fee of $10 each. Details on how to register are included in the documentation.

YAM EXPANSION

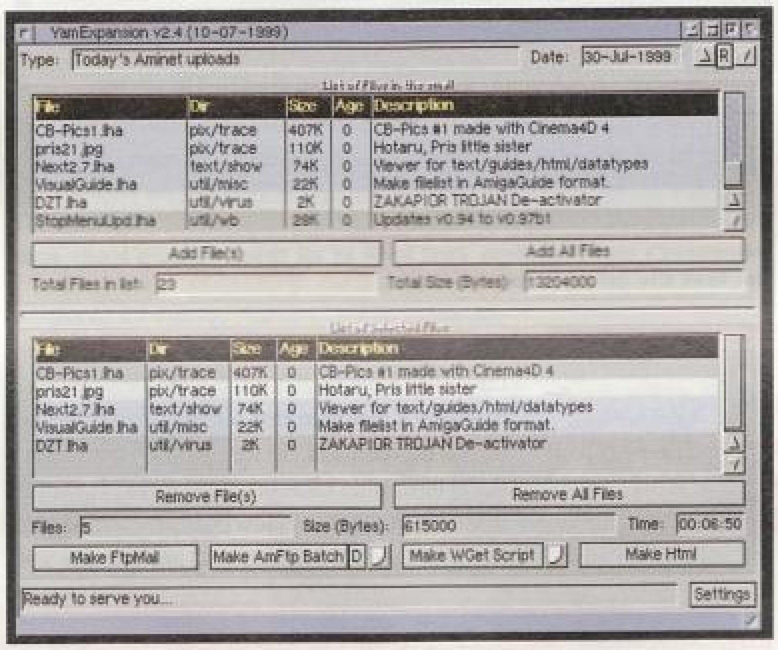
-Serious-
/Comms/Other/YamExpansion

Marcel Beck's *YAM* is possibly the most popular email client for the Amiga. The fact that it is free is partly the reason for this.

Not only is it an immensely powerful and yet friendly piece of software in its own right, but ingenious people have found ways to extend its functionality.

One such add-on pack is this, *YAM Expansion*. It makes of a little-known aspect of the Aminet, its mailing list. If you subscribe to this list, you will be sent regular mails listing all the latest uploads to the Aminet. *YAM Expansion* can parse these mails and allow you to batch-retrieve the new uploads of your choice – either by ftp-mail or in conjunction with AmFTP – with a straightforward MUI-based interface.

Richard Drummond



Type: Today's Aminet uploads
Date: 30-Jul-1999

File	Dir	Size	Age	Description
CB-Pics1.lha	pix/trace	407K	0	CB-Pics #1 made with Cinema4D 4
pris21.jpg	pix/trace	110K	0	Hotaru, Pris little sister
Next2.7.lha	text/show	74K	0	Viewer for text/guides/html/datatypes
VisualGuide.lha	util/misc	22K	0	Make filelist in AmigaGuide format.
DZT.lha	util/virus	2K	0	ZAKAPIOR TROJAN De-activator
StopMenuUpd.lha	util/wb	28K	0	Updates v0.94 to v0.97b1

Total Files in list: 23
Total Size (Bytes): 13204000

File	Dir	Size	Age	Description
CB-Pics1.lha	pix/trace	407K	0	CB-Pics #1 made with Cinema4D 4
pris21.jpg	pix/trace	110K	0	Hotaru, Pris little sister
Next2.7.lha	text/show	74K	0	Viewer for text/guides/html/datatypes
VisualGuide.lha	util/misc	22K	0	Make filelist in AmigaGuide format.
DZT.lha	util/virus	2K	0	ZAKAPIOR TROJAN De-activator

Files: 5
Size (Bytes): 615000
Time: 00:06:50

Ready to serve you...

File retrieval? With an email package? What will they think of next?

DISCLAIMER

This *AFCD* has been thoroughly scanned and tested at all stages of production. We recommend that you always run a virus checker on ANY software before running it. Future Publishing Limited cannot accept any responsibility for disruption, damage and/or loss to your data or your computer system which may occur while using this disc, the programs or the data on it. Ensure that you have up-to-date backups of data contained on your hard drives before running any new software. If you do not accept these conditions, do not use this disc.

DISC NOT WORKING?

If your *AFCD* is defective, please return it to the address below. Please make sure you have followed our installation procedures correctly to ensure that there is no physical problem. Please send us the *AFCD* along with a description of the fault (not forgetting your name and address). A new working version should be returned to you within 28 days. The return address for faulty discs is:

TIB PLC • UNIT 5 • TRIANGLE
BUSINESS PARK • PENTREBACH •
MERTHYR TYDFIL • CF48 4YB

Your *AFCD* should only need replacing if the CD itself cannot be read. If you're experiencing problems with an individual application, phone our technical support line This is open between the hours of 2pm and 5pm every Tuesday.

Tel: 01225 442244 Fax: 01225 732341
Email: amformat@futurenet.co.uk
(Please remember to put "Coverdisc" in the subject line.)

Please note that the helpline staff provide assistance with technical problems directly related to the CD and cannot provide training on the software or hardware in general.

We want your work!

You can either send it to us on floppies, Zip disks or CDs (we do take other media formats too). If you are going to send us a multiple floppy backup of your work, please use the version of *ABackup* we supply on the CD in the +System+/Tools/Disk_Tools drawer. We'll return any Zips you send us, so don't worry about getting your disks back.

If you have any further queries about how to send your software in then consult the Submissions Advice on the CD (in Start_Here!, or in the ReaderStuff or +System+/Info drawers).

Files you send this month will probably appear on *AFCD49* – *Amiga Format's* February issue.

Please tell us:

Your name: ....

Your address: ....

....

Your postcode: ....

A contact number or email address: ....

Your signature: ....

In respect of all material which forms my reader contribution to Future Publishing's Amiga Format I hereby warrant that:-
(1) the material is original and does not infringe any other material or rights;
(2) the material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;
(3) that there are no legal claims against the material provided;
(4) that I have full power and authority to provide this material to Future Publishing.

AMIGA FORMAT
FloppyFlux
EvenMore
VersCheck
Xoper

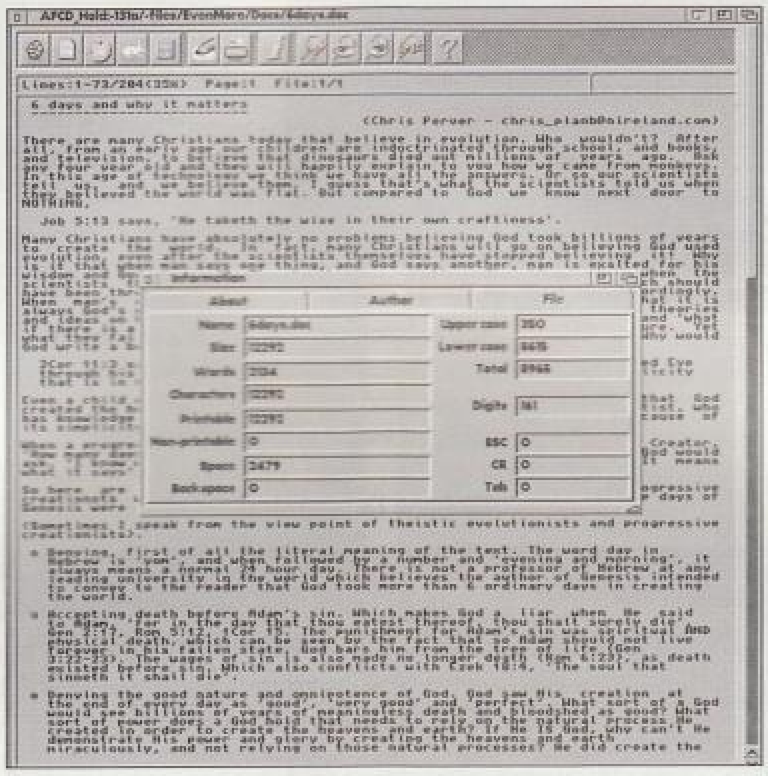
Serious Disk

When you've created floppy backups and checked your system is up to date there's even more to be discovered

EVENMORE

EvenMore is a nice looking text viewer that has been designed to look good on your Workbench. Rather than the bog standard commands that are normally associated with the average text view, *EvenMore* comes armed with a barrage of additional features that would probably take up the whole page if listed including: a scrolling window, an AppWindow, an AppIcon, an AppMenu, complete font sensitivity, it supports tooltypes, saves preference files, allows bookmarks, has the ability to search and allows you to send the currently loaded text straight into your favourite text editor.

EvenMore requires Kickstart 3.0 and the reqtools.library (supplied). Installation is just a matter of copying the reqtools library to your LIBS: directory, copying its complete directory to your hard disk and setting up its preferences file. To further enhance its features, *EvenMore* will make full use of both the asl.library and XPK libraries.


AFCD_Hold:-131a/-Files/EvenMore/Docs/6days.doc
Lines:1-73/204(35%) Page:1 File:1/1
6 days and why it matters
Information
About
Author
File

Evenmore's main window. Just look at all those feature icons and the text file information window!

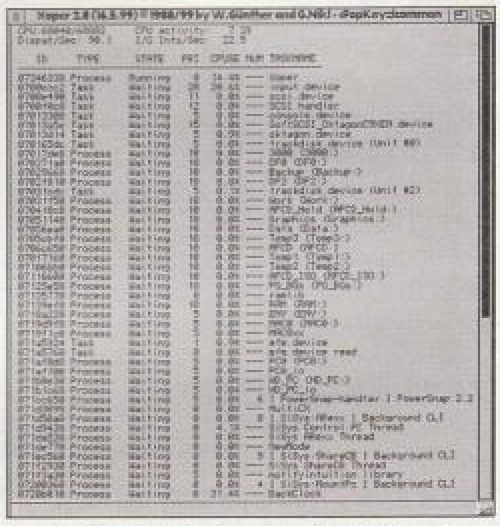
> *Xoper is a handy self-contained tool that should be on everyone's system as it requires nothing special to run and doesn't require any installation*

XOPER

This is a great little freeware system monitor to display various system lists. For example, it can display all running tasks along with their cpu-usage. *Xoper* does not only display a list of all tasks but it can show other system lists from Exec, DOS or Intuition as well as the port list, available windows and screens or DOS-devices. Do you need to know which system fonts are used by the programs or windows you currently have open? Enter the word "Fonts" in *Xoper*'s dialogue box and hit return and all will be revealed. To run *Xoper*, you simply need to double click on its icon. *Xoper* will open its scalable window detailing the current tasks, processes and a whole host of other information relating to your Amiga as well as a full list of all of *Xoper*'s commands.

At only 31K in size, *Xoper* should find a place on everyone's system. It's a really handy self-contained little tool that requires nothing special to run. It doesn't require any installation and you should be able to use it on any Amiga with at least *Kickstart 1.2* (does anyone still use this?) and at least 512K of RAM. No problems should be encountered running *Xoper* on any Amiga with 68020, 68030, 68040 and 68060 processors fitted.

Errol Madoo



Xoper's main interface window. It's just a shame about the WB1.3-looking scrollbars.

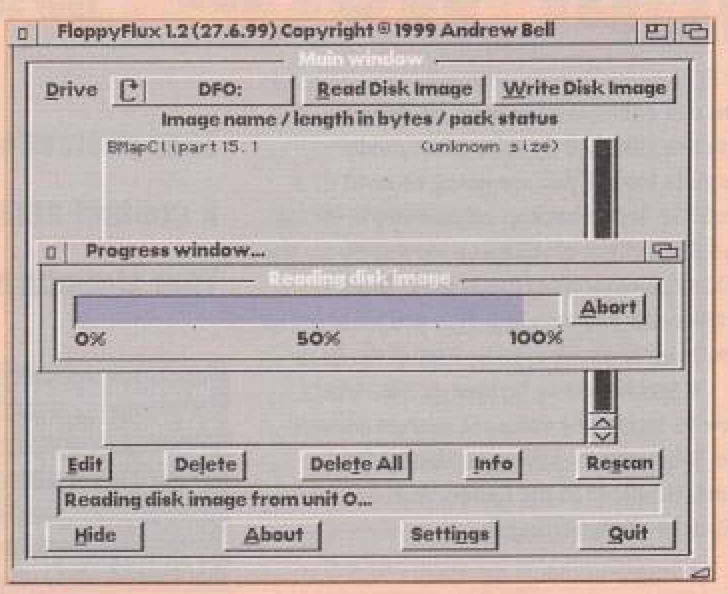
VERSCHECK

This program is so good that it has found a permanent position on the *Amiga Format* coverdisc CD-ROM. In its simplest terms it is a collection of sub programs that will scan your system and on completion, will inform you of which of your system files are outdated or have been superseded with newer versions. These checks include a full scan of all your system libraries, devices, datatypes, handlers and even MUI associated files. Be warned! this is a very complex program and I would recommend that you read the supplied documentation thoroughly before attempting to use or install the program.

FLOPPY FLUX 1.2

If you have loads of old demo disks, PD disks or even magazine disks that you don't use much but would like to keep a backup of *Floppy Flux* may be the program for you. If your hard disk has a lot of free space, *Floppy Flux* allows you to quickly store the contents of your old floppies as 900K "disk images". You can even compress these disk images to save some space if you have the optional XPK installed. *FloppyFlux* does not just "copy" files off your floppies, but instead reads the whole disk and dumps it to a file (disk image), on your hard disk. This means that non-standard disk formats can be backed up too but please bear in mind that *Floppy Flux* is not designed to, and will not, "back-up" commercial games. Only disks that can be read by the trackdisk.device can be stored. This basically means that DOS disks, most magazine coverdisks, most mega-demos, most PD disks and so on, can be successfully stored.

***Floppy Flux* requires a hard drive, OS 3.0+ along with at least a 68020 CPU. Installation is simply a matter of copying the supplied gtlayout.library to your system's LIBS: directory and running the main program. As already mentioned, *Floppy Flux* also allows you to compress the floppy disk images that are stored on your hard disk and this is accomplished using the XPK system which can be found on Aminet or most good PD suppliers. *Floppy Flux*'s interface is simple and easy to use so you should be creating your very own floppy disk images in no time at all.**



Drive DF0:

BMapClipart15.1 (unknown size)

Reading disk image from unit 0...

FloppyFlux is at work creating a disk image of an old clipart disk.

AMIGA FORMAT
From electric shocks to air attacks...
...you can use it all to kill the little men in your Amiga
Gallowz:
Mines:
SpotIt:

Games Disk

When you've finished nuking the world in various ways you can enjoy a nice calming game of spot the difference

REVENGE AGA

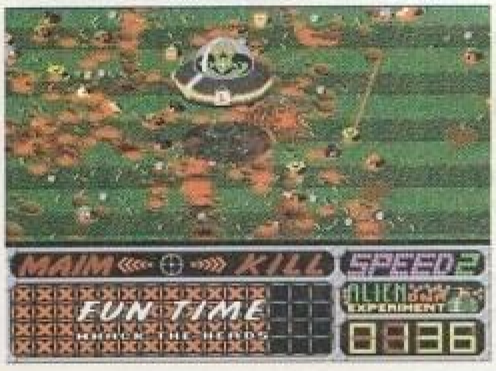
REVENGE
(ARMCHAIR ASSASSIN 2)
MUD BLOOD N' BONES
EDITION

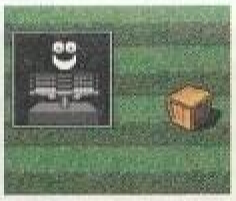
Revenge is sweet, particularly when you can pick the speed of your victims.

If you think of *Lemmings*, then *Worms*, then a shoot-em-up and then combine all that with a timer you'll come pretty close to what *Revenge AGA* is all about. The object of the game here is quite simply to kill everything that moves. Little men (victims) run all round the screen and you can use any of the 10 weapons you have at your disposal to totally annihilate them. The 10 different weapons deserve a special mention as they are both effective and in most cases very humorous as well. Electric Shock, for example displays a rain cloud above your selected victim and on pressing the LMB a bolt of lightning fries him and Fireball sets your victim alight, causing them to run around blindly, engulfed in flames. To add a little telespice to the game you can also replace the games' normal victims with various Teletubbies and Spice Girls should you be so inclined…eh oh!

The *Revenge* options screen allows you to set the victim speed, the chat time, the ground type and also the game mode: either Maximum Mayhem, where you shoot all the victims or Sequential Slaughter, where you need to shoot the victims in a specific order. *Revenge* should run on any AGA Amiga and it requires no installation or assigns so you can just copy its directory straight to your hard disk.

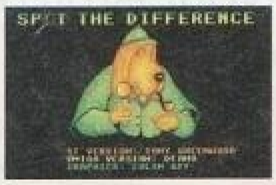
Victims run all round the screen and you can use any of the 10 destructive weapons you have at your disposal to totally annihilate them





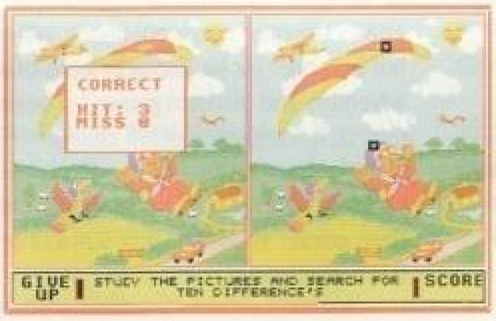
Ahh, the joy of successfully annihilating your enemies.

SPOTIT



SpotIt is a game based on the Spot The Difference puzzles that can normally be found in newspapers and magazines. It features nine different pictures which can be selected from the main options screen. You will then see two pictures that look the same but the one on the right is incomplete compared to the one on the left. To play, simply move the mouse pointer over an area of the right picture which looks different and press the left mouse button. If you click on a difference then you score a hit and 25 points. If you click on anything else you will get a miss. You must score 10 hits to win. If you get five misses then you lose. Once you find a difference a small box will appear over it so you don't pick it again.

So, there you are thinking that once you have played all nine pictures you must be finished. Well you're wrong, each time you choose a picture the game will select from 11 sets of 10 differences meaning that every time you select a picture the differences will be unique. *SpotIt* should run on all Amigas with at least 1MB of RAM.



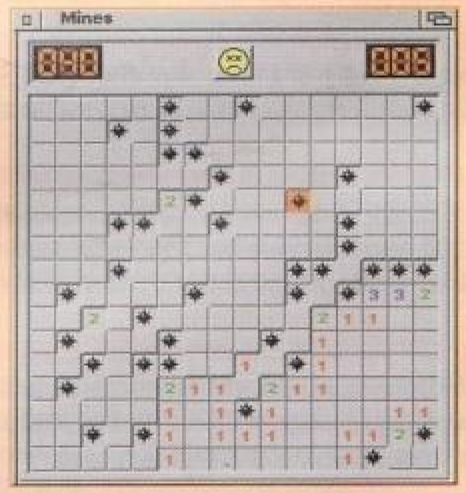
Even if the differences are easy to spot, at least the pictures are novel.

Errol Madoo

MINES

Mines, a game based on Minesweeper, looks great and runs happily in its own Workbench window. The object of the game is to locate all the mines in the minefield as quickly as possible. To do this you uncover the squares on the game board that do not contain mines and you mark the squares that do contain mines. The trick is determining which squares are which. If you uncover all the squares without mines, you win, if you uncover a mine instead of marking it, you don't!

The game comes supplied with some basic sound effects and you can also add your own if you wish. If you find that the default "beginner" mode is a little too easy you could always right-click on the smiley face, select custom and enter some larger numbers in the width and height gadgets, not forgetting to add loads of mines as well!

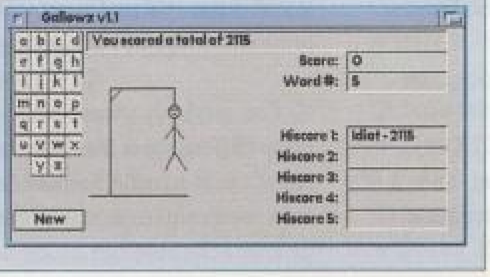


Ooops! Guess I found one. Mines opens its own little window on your Workbench.

GALLOWZ

This is a nice Amiga version of the age old game of Hangman. The computer selects a word or phrase and using letter buttons on the left hand side of the window, it's your job to guess what has been chosen. Should you choose a letter which isn't part of the answer, the little guy in the middle of the window will be one step closer to death. You're only allowed to make 11 mistakes as one wrong answer after that results in the end for your little friend.

You score points each time you get a letter right and if a letter appears more than once you'll score more points. Get the puzzle right without making a mistake and you get a whopping 1000 point bonus. Each mistake you do make will reduce the bonus. Your mission is to score as many points as possible. Two film related datafiles are supplied, along with four football related files. An editor will be released soon to allow you to create your own datafiles. *Gallowz* should work on any Amiga.



You scored a total of 2115

Score: 0
Word #: 5
Hiscore 1: idiot - 2115
Hiscore 2:
Hiscore 3:
Hiscore 4:
Hiscore 5:

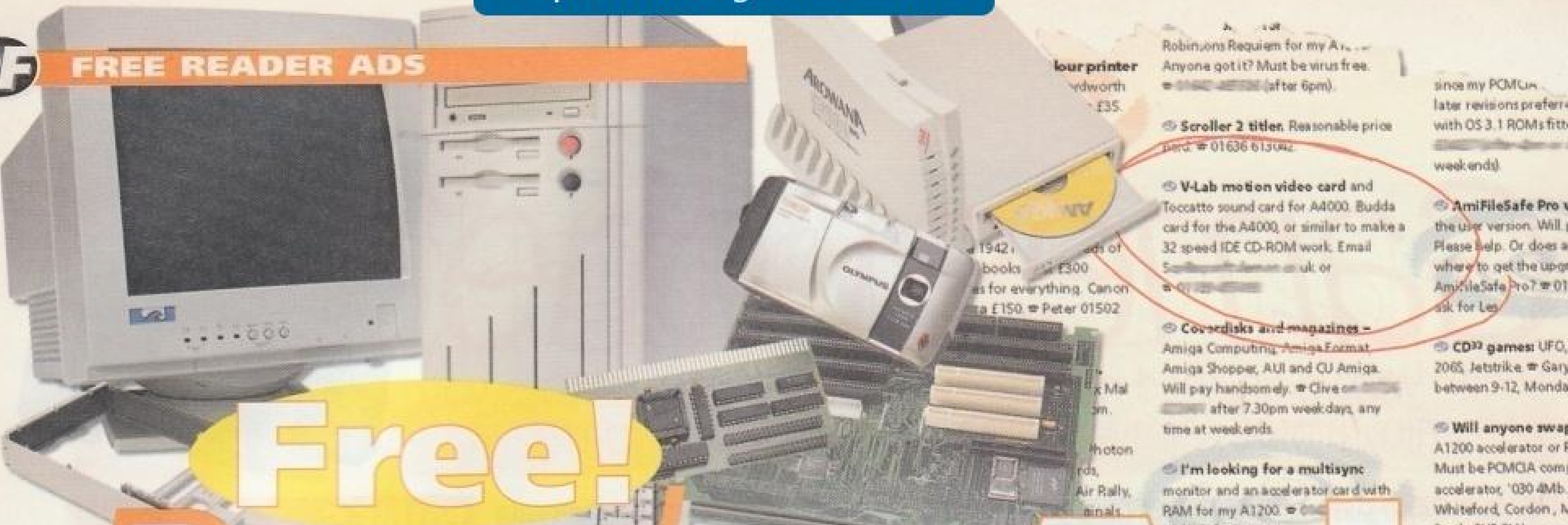
Don't hang around – pick a letter and solve the phrase.

DISK NOT WORKING?

We take every care to test the coverdisk software, but Future Publishing cannot accept any responsibility for any damage occurring during its use. If your disk is faulty, send it back with 2x26p stamps and an SAE to:

AMIGA FORMAT (insert name of disk) • TIB PLC • UNIT 5 • TRIANGLE BUSINESS PARK • PENTREBACH •MERTHYR TYDFIL • CF48 4YB

If there is a manufacturing error then the stamps will be returned with a replacement disk.



Robinsons Requiem for my A… Anyone got it? Must be virus free. ☎ [redacted] (after 6pm).

Scroller 2 titler. Reasonable price paid. ☎ 01636 613042

V-Lab motion video card and Toccatto sound card for A4000. Budda card for the A4000, or similar to make a 32 speed IDE CD-ROM work. Email [redacted].uk or ☎ [redacted]

Coverdisks and magazines – Amiga Computing, Amiga Format, Amiga Shopper, AUI and CU Amiga. Will pay handsomely. ☎ Clive on [redacted] after 7.30pm weekdays, any time at weekends.

I'm looking for a multisync monitor and an accelerator card with RAM for my A1200. ☎ [redacted] and ask for Darren

Free! Reader Ads

Buy, sell and exchange your Amiga hardware and software in the best free ads pages around

FOR SALE

Terminator 2, F1GP, Shuttle, PGA Tour Golf, £5 each. All boxed originals with manuals. Also Atari STFM internal disk drive. Reasonable offers. Email 13198@oakham.rutland.sch.uk for details.

A1200, 10MB, 68030 accelerator card plus FPU, 80MB hard disk OS 3.1 ROMs and disks and a couple of games, £200 ono. Buyer pays shipping. Email for details palaste@cc.helsinki.fi.

DPaint V, Time of Reckoning, AGA Toolkit, Gloom Deluxe £5 each or £15 for all of them. Email d.stone@ukonline.co.uk or ☎ 01278 439143.

A2000HD GVP controller card, 8MB RAM, accelerator, Philips monitor, boxed games and software £200. Microvitec multisync £100, scan doubler with flicker fixer for A1200 £50. ☎ 01773 765738 (Derbys).

CD³² plus SX-1, 120MB hard disk, floppy drive, 6MB, mouse, joystick, games and utilities, £85 ono. Buyer pays postage. ☎ Chris 01904 652020 after 5pm or email rooney@qlab.swinternet.co.uk.

Squirrel SCSI interface, boxed, manuals, software, £40. XL 1.76MB external floppy drive, handy for use with PC disks, boxed, manuals, software, £40. ☎ Anthony 01925 480751.

Gunship 2000 (Amiga CD-ROM) original, £8. Also Dragon-Ninja, Stunt Car Racer, Pit Fighter, £10 the lot. ☎ John 0141 5780043 (Glasgow) or email johnnybas71@hotmail.com

Amiga 1200 power tower, 68040/40MHz, 2.5GB hard disk, 18MB RAM, Catweasel 2 with HD floppy drive, 16 speed CD, 14" MicroVitec multisync monitor. Cannon Bubblejet BJ20. Loads of games, magazine CDs/floppies, £400 ono. Will not split. Manchester area. Email john@ukbury.screaming.net.

MusicXv2 and/or Notatorv 2 boxed with manuals all in absolutely mint condition, £20. A1200 midi interface, boxed £5. CamControl Fuji digital cameras i/f download software, manual and adaptor, £15. ☎ 01606 350414 (Cheshire).

Older Amiga stuff A1000 working, no keyboard or top case, £15. A500 spares, A520 power brick etc. 2MB in 256Kx4 Drams 12 256K 30 pin SIMMS. All very cheap. ☎ 01250 876218 or preferably email gregor@spalding.freeserve.co.uk.

Amiga 1200 in power tower with Apollo 1260/50 and 16MB fast RAM, 500MB hard disk, 32x CD-ROM, full PowerFlyer (support up to four IDE drives), scandoubler, 14" monitor, speakers, lots of software, £450 or good offer considered. Email Adam Stevens, ste@adam17.freeserve.co.uk.

Amiga 1500, KB, 1084S plus second 1500, KB, 1084S (monitor needs attention). Will consider splitting but best offer for lot also gets loads of productivity, adventure and platform games (all boxed). Email deryck.lawrence@freefall.co.uk.

Amiga branded M1438S monitor with screen filter, offers? ☎ Dave 01904 624637 or email lklett@hvymetal.u-net.com.

250MB hard disk 2.5", over £90 software, installed Workbench 3. Fits A1200, £45 ono. All in perfect working order – selling due to upgrade. ☎ 01282 698012.

Blizzard 1230/50 with FPU and 8MB, £50. Canon BJ10ex printer (plus driver), £50, A500 PSU, £5, Micronik Scandoubler (internal A1200), £40. ☎ 0973 806641 or email darren@crown.free-online.co.uk.

Lots of Amiga mags and CDs. Complete set of CDs from CU Amiga and Format up to start of the year plus lots of other CDs and floppies. Offers? ☎ Mick 01992 711204 (evenings).

A1200 tower 040/28MHz Apollo 16MB, 850MB hard disk, 4x CD-ROM, mode, Amiga keyboard, Amiga mouse, 1084s monitor, NetConnect 2, Turbo Print 6, manuals, magazines, CDs. Sell at £200. ☎ 01427 891975 or email carlsmail@bigfoot.com

32x SCSI internal CD-ROM, £30. 2x W SCSI internal SCSI CDWROM, £100. Surf Squirrel, £65. 3.5" 500MB hard disk, £25. Buyer pays P&P or collects. ☎ Mark 01458 445051 (before 11am).

WANTED

I need a copy of Worms disk one as mine is corrupt. No copies of pirate versions thanks. ☎ Oli 07788 985565.

Rombo Vidi Amiga 12 digitiser. Also PC emulator disk for transferring images captured by Amiga onto PC. Newcastle/Northumberland area. Will pay cash, £40. ☎ Eric 01670 787435.

Turbo, Outrun, Europa, Alien Pong Trilogy, Galag Wars, Bombjack, Ultimate Pinball Quest, Blues Brothers. ☎ Don 01422 350159.

Monkey Island games desperately wanted. Any offers to part with either or both? Write with offers please to: Paul, 1 Park Terrace, Whitby, North Yorkshire. YO21 1PN.

Desperately wanted – Elvira the arcade game by Flair Software. Also BAT by UBI Soft. Will pay for games and postage. Write to Les Taylor, Corraneena, Kilconnell, Ballinasloe, Co. Galway, Eire.

Desperately in need of Workbench 3.0 installer and a working copy of Workbench 3.0 as both are bust. ☎ 01507 443774.

Manual for Leisure Suit Larry 2 or codes and disk one for Puggsy as mine is corrupt. I have loads of games that you may want in exchange. Also, does anyone know how to open the doors on X-IT level 10? Please let me know. ☎ Neil Pearson 0161 7643818 or email neil@pearson.1to1.org.

I am looking for a very old and rare Amiga game called The Sentinel. Does anybody know where I could get it or does anybody have it? I also want the very first cover CD from CU Amiga and a copy of the Easy Amos install disks. Will pay for any of these. Email jamesstark@james-s.freeserve.co.uk

Can anybody please help me? I recently bought a copy of Beneath A Steel Sky from a car boot sale but disk 11 was missing. I would be grateful if anyone could help me to aquire a copy of the disk. Email brianmac@cableinet.co.uk or ☎ Brian 0151 4747398.

512KB 68K Mac ROM wanted for ShapeShfiter or Fusion. Could someone please help me out? R Scott, 76 Scawfell Avenue, Workington, Cumbria. CA14 3JD.

I desperately need information on how to make games in Assembler. Contact John L at 14 Almond Avenue, Kidderminster, Worcs, DY11 5PU.

Wanted. Citadel by Black Legend for an A500. Originals only please. I f possible ☎ 01733 700339 after 5pm please.

Desperately needed – a copy of Gods to replace deceased disks. Original disks only. No manual needed. Will pay reasonable price plus postage. Write to Chris Modrey, Elounda, 72053, Crete, Greece.

PERSONAL

Also see the AmigaAngels document on our CD.

Reliable Amiga 1200 user would like to swap software with other reliable Amiga users. 100 per cent reply. Please send software list to Mr Pestridge, Flat 1, 37 Jefferson Road, Sheerness, Kent, ME12 2PU.

Amiga Energy – the Amiga fanzine from the producers of The Final Frontier. For more information visit http://www.infinitefrontiers.mcmail.com/. Send £2.75 cheque/postal order to "Infinite Frontiers", PO box 8966, Great Barr, Birmingham, B43 5ST.

Cyberton – The Undernet. Visit my website for great links to Amiga and sci-fi sites: http://www.cyberton.u-net.com/.

Amiga Games Totaled – a unique games cheat page with codes, tips, trainers and even action replay codes. Need a cheat, then try me. http://www.miggybyte.freeserve.co.uk/totaled.

Website, HTML and FTP help given for beginners to get you started in designing and uploading web pages. Contact webhelp@badger.org.uk or see my site at http://www.badger.org.uk/webhelp.

If you are a member of, or know about a user group in Norway which needs a member, please email me, Farald, at wwat@online.no. Thanks.

I am an Amiga artist/musician wanting to do graphics or music for your PD, shareware or games. Highly proficient with Octamed, Soundstudio and Deluxe Paint. Both AGA and standard Amiga formats. ☎ Vivian 001 505 835 2841 (New Mexico).

Any Amiga users new to the Internet who want some free links/gallerys and downloads to get them going can go to my site at: http://www.g251273.freeserve.co.uk or email me (Paul) at: pol@g251273.freeserve.co.uk.

Any Amiga magazines or disk magazines require another contributor? I have knowledge of A1200 and other Amigas. Will work for free. Article previously published in *Amiga Format*.
☎ Ross Whiteford 01738 850732.

Do you want Worms DC levels, but don't have a CD-ROM? Simply send a disk and 50p to: Mick Galvin, 84 St Cuthbert's Cres, Albrighton, Nr Wolverhampton WV7 3HW.

Does anyone have an interest in towers for A1200s for approx AUS$300 plus postage? If anyone has an A400 they don't want, working or not, send it to us – we'll pay for postage. Can anyone get us pictures of A1200 Zorro boards so we can see how they fit? Please reply to either outback@primus.com.au or evil_homer_rulz@hotmail.com.

BBSes

Alpha Zone BBS, over 10,000 files, online CD-ROMs, 56,000bps and free email.
☎ 01788 551719 after 10pm.

Bobbs, ☎ 01243 371644, online 24 hours. Based in Hampshire, south east, host for Powernet. Loads of files, home of BullRPG, The best Amiga Lord clone. Speeds up to 56K.

Skull Monkey BBS, Lincoln. Online 24 hours.
☎ 01522 887933. Friendly sysop. Email sns@skullmonkey.freeserve.co.uk – keeping the Amiga alive.

Want to chat about anything and everything with people all over the globe? Then join Fluffynet – the fluffiest Fido-style BBS mail network!
☎ Total Eclipse BBS, +44 (0) 870 740 1817 or visit http://www.fluffynet.n3.net for information on how to join. Hubs and nodes available. Anyone welcome!

Alpha Zone BBS, over 10,000 files, online CD-ROMs, 56,000bps and free email. ☎ 01788 551719 after 10pm.

Arachnoids BBS. Leicestershire Online 24hrs.
☎ 01509 551006 Friendly Sysop over 10,000 files online. No ratios everything free. Ninja@Arachnoids.freeserve.co.uk.

Quest BBS, Wakefield. West Yorkshire's largest BBS with over 30,000 files online, including the latest 7 Aminet CD-ROMs. Online weekdays, 6pm-6am and weekends, 2pm-6am. ☎ 01924 250388.

Tribal Mirage BBS, Online 24 hours, Running Xenolink v2.8, Amiga Sysop with over 15 years of Amiga experience. 20,000+ files online. File requester. Amiga support given. Hertfordshire. ☎ 01992 410215, email sysop@tmbbs.freeserve.co.uk.

Total Eclipse BBS, ☎ +44 (0) 1983 522428, 24 hours. 33.6K, home of Liquid Software Design and MAX's Pro support.

The Forum! BBS online 24 hours, Kilmarnock, Scotland. Over 35 members, 2,000+ files available, including games, pictures, utilities, etc. Sysop: Jamie Maguire. Run by a software development student.
☎ 01563 540863. 36K.

Elevate BBS, Hants, online 24 hours.
☎ 01329 319028.

Bedlam BBS, Leicester, online 24 hours.
☎ 01162 787773.

Entertainment BBS, Wigan, online 24 hours.
☎ 01942 221375.

Frost Free BBS,
☎ 01484 327196 (Slaithewaite, W. Yorks).

Bill's BBS, Cumbria, online 24 hours (mail only between 2.30am and 3.30am), ☎ 01229 434393 or 0870 7878615. Sysop: Bill Clark.
Visit http://cumbria.cjb.net, email billsbbs@cornerpub.com or bill.clark@ukonline.co.uk. Supports Fidonet. Loads of free files, games, doors, etc. Unlimited downloads.

Zodiac BBS, Hants. Online 11am-7pm 7 days a week. ☎ 01243 373596. Sysop: Destiny Co. Sysop: Axl. Running Maxs Pro v2.11, Hellnet. Lots of files.

On The Oche BBS, Waterlooville, online 24 hours.
☎ 01705 648791.

Moonlight BBS, Bedford, online 6pm-8am, 24 hours at weekends, ☎ 01234 212752.
Sysop: John Marchant. Email gnome@enterprise.net Official Transamiga Support BBS, unlimited downloads, friendly sysop with excellent knowledge. Aminet online. Run by an experienced Amiga programmer who will help you out for free.

X Zone BBS, supporting the Amiga for over two years. Do you want the latest files? ☎ 01635 820590, 6pm-1am, modem callers only (33.6K).

USER GROUPS

French speaking Amiga club. PD disks, help, buy-sell, advice. Also specialists in 8-bit emulation. Please write to BP 120, 4000 Liege 1, Belgium. Please, no PC!

Amiga Club International members receive a bi-monthly magazine disk and PD prgram plus helpline. Recently relocated from London, Falloden Way to Dover, the Gateway to Europe. Established 1989.
☎ 01304 203128 or email robroy@catdtp.freeserve.co.uk.

Are there any Amiga users in Cornwall interested in starting a user group in the Helston/Falmouth area? If so, email frank@massin.freeserve.co.uk or
☎ 01326 573596 and ask for Frank.

Amiga North Thames meet on the first Sunday of the month at St Mary Magdalene Vestry, Windmill Hill, Enfield, 1-5pm. Software/hardware problem solving, demos, news and Amiga games.
☎ Mike 0956 867223 weekends or email Ant.london@ukonline.co.uk.

New user group being set up called TAG (Total Amiga Group). Initially in the Somerset area.
☎ Phil 01458 832981.

Are there any Amiga users in Birmingham who want to set up a user group?
☎ Hitesh 0121 6056452.

NPAUG is a new Amiga user group based on the net. We offer a free monthly magazine and tech support over the web. If you are interested in joining, visit our website: http://members.aol.com:/npaug/home.html or email me: npaug@aol.com.

Are you Welsh, live in Wales or love Wales? Then join Cymru Amiga User Group. Visit us on http://bounce.to/caug or email dark.lords@deathsdoor.com to join.

Continued overleaf ➡

Power Amiga User Group based in Portsmouth for users of all ages and levels. We meet once a month on the last Saturday. We generally have Amigas of all sorts, prize draws, tutorials and general discussions each meeting. ☎ Richard 01705 829541 or email richard@poweramiga.freeserve.co.uk or visit http://www.poweramiga.freeserve.co.uk.

Need a new IRC chat channel? Come to #PoweredByAmiga on ARCNET for fun and informative chat about Amigas and otherwise. Visit our URl at http://www2.prestel.co.uk/amigav/PBA/. We mostly meet at weekends about midday.

UAUG est. 1986 (non-profit making), 40 page magazine. Free cover disk, 20,000 free PD titles, digitizing, scanning, helplines, support for all Amiga users. Free gift upon joining. Send SAE for details to: The Editor, 13 Rodney Close, Rugby CV22 7HJ.

South West Amiga Group, (SWAG) meets every 1st Thursday of the month, 8:30pm at the Lamb & Flag (Harvesters), Cribbs Causeway, Bristol. SWAG intends to get Amiga users together, provide info and support, promote the Amiga and have a laugh. Contact Andy Mills: Swag@wharne.u-net.com.

Amiga Support Association. We offer help, advice and a friendly chat. Monthly meetings, tutorials and a fact file are all available. Join our mailing list on the net Amiga_SA-Subscribe@egroups.com or contact Phil: Snood@ukonline.co.uk or ☎ 01703 464256.

Huddersfield Amiga User Group (HAUG) meet on the first and third Wednesday of every month at The Commercial Inn, Market Street, Paddock, Huddersfield from 7.30pm onwards. ☎ Geoff (01484) 322101 email geoff@geemil.demon.co.uk or visit http://websites.ntl.com/~paul.4/index.html.

Felbrigg Amiga Group meets weekly near Cromer. We are a group for novice and expert users. For more information ☎ 01263 511705 or 824382.

Deal Amiga Club welcomes all old hands and newcomers alike, whatever your ability. Admission £1, under 16's 50p. Annual membership is now free. Also if you've bought some bits and don't know how to put them together then bring them along and let us help. ☎ 01304 367992 or email superhighwayman@hotmail.com.

Pennine Amiga Club. Free worldwide helpline supporting all models. Non-profit making club. Not a business. We help with free advice: ☎ 01535 211230.

Workbench, the Manchester Amiga user group. We meet on the first Thursday of each month at 7.00pm and offer general Amiga chat. ☎ 0161 839 8970. Also, check out our website at: http://www.workbench.freeserve.co.uk Alternatively, email: mail@workbench.freeserve.co.uk.

West Lancs User Group. Sundays, 1pm-4pm at St. Thomas School Hall, Highgate Rd, Upholland. ☎ 01695 623865, email ralph@twiss.u-net.com. Help and advice, novices and experts welcome.

Is there anybody in the Northamptonshire area interested in starting up a new user group? Please contact me: ☎ 01536 724309 or email nsthomas@ukonline.co.uk.

Want the latest reviews, news, interviews, articles? then visit the NEW AIO website at http://www.aio.co.uk, or visit #amos on ircnet, Saturday 9pm-midnight.

SEAL meets twice monthly at Northlands Park Community Centre, Basildon, Essex. We offer help, tutorials and presentations plus scanning, printing and email. Contact Mick Sutton, 20 Roding Way, Wickford, Essex. ☎ 01268 761429 (6-9pm). Email seal@thunder.u-net.com or visit our website, http://seal.amiga.tm.

Northern Ireland user group welcomes new members. Emerald Amiga Users meets regularly in Strabane. Please contact Charles Barr. ☎ 01504 884700.

Medway and Maidstone Amiga collective. Meets monthly. Advice at all levels. Experts and beginners wanted. ☎ Dave 0961 809466. Support your local user groups!

Join a new email club for Klondike, a Reko Productions game. Cardset creators and cardset collectors, Amiga and PC. Email kevin@reko.karoo.co.uk (make friends).

NAC Nottingham Amiga Club New club starting soon. New/old users welcome! From A500 to A4000. Hints and tips on all software, games and hardware. ☎ Mark 0115 9566485 weekends only!

New Amiga sound and demo association seeks input, contacts and support to form a user group based around the Amiga music and demo scene. Interested? ☎ Dave 01243 864596 or 0961 985925.

Interested in Internet Relay Chat? Why not visit #Amigazone on Dalnet? We are a friendly bunch and meet at 10pm every day. Visit our website at: http://www.tsd-ltd.demon.co.uk.

Coventry and Warwick Commodore Computer Club (CWCCC) meets once a month on the first Wednesday at Earlsdon Methodist Church, Coventry. For more information email Luke Stowe luke.stowe@ukonline.co.uk or visit http://ukonline.co.uk/luke.stowe/cwccc/index.html.

Great Yarmouth user group. Anyone interested in joining this user group please contact John ☎ 01493 722422.

Amiga free helpline see AFCD44: readers stuff/ Terry Green or ☎ 01709 814296 for free help.

ADVERTISE IN AMIGA FORMAT... FOR FREE

The editor reserves the right to refuse or amend ads. We accept no responsibility for typographical errors or losses arising from the use of this service. Trade ads, including PD advertising, will not be accepted. ILLEGIBLE ADS WILL BE FILED IN OUR BIN!

Name: ....

Address: (not for publication)..

....

Postcode ....

Telephone: ....

Date: ....

Please tick to show required heading:

☐ For Sale ☐ Wanted ☐ Personal

☐ BBSes ☐ User Groups

Return to: Reader Ads • Amiga Format • 30 Monmouth Street • Bath • BA1 2BW. You can email amformat@futurenet.co.uk, putting 'Reader Ads' in the subject line.

Unfortunately we cannot guarantee insertion in a particular issue.

I have read and understood the conditions for the inclusion of my ad

Use one space for each word. Only the words in this section will be printed.

Free!

Signature: ....

Amiga
User
Groups

Deal Amiga Club

Discover how Deal Amiga Club is making a stand within a PC-dominant world

Once every six weeks there is a computer "technofair" in Canterbury's Kingsmead Leisure Centre. All of the stalls there are PC orientated, from software to peripherals, with one exception. John Worthington, this month fresh out of hospital from an operation on his sinuses, and his Amiga can always be found offering help and advice on all things Amiga, and plugging the local Deal Amiga Club. John says his presence at a predominantly PC orientated show always turns heads. Most people remember the Amiga, many of them having owned one at some point and are surprised to see it still going strong. John says that most people who see his machine come back two or three times during the show to see if it really is an Amiga, or whether the ubiquitous Microsoft logo will make an appearance at some point. "Most people are amazed at what the Amiga is capable of, having only really experienced a few games on an A500."

The twice weekly meeting in the ambulance hall.

The technofairs can draw a large crowd all looking for computer bargins.

> John says that most people who see his machine come back two or three times during the course of the show to see if it really is an Amiga

(Above) The Deal Amiga Club stand at the technofair.

Although all of the other stalls at the show are PC orientated, a large proportion of them sell general peripherals and consumables that any Amiga owner can use as well, quite often at a very attractive price. During my visit, John took me on a tour of the fair, which while modest in size, contained a wide range of goods. John explained that many Amiga owners visit his stall at the technofair looking for advice on how to expand or modify their Amiga. Most of the time they are able to pick up the pieces they need at the fair and even perform the modifications then and there with help from members of the Deal Amiga club. Whilst I was there I spotted a replacement power supply for my 4000T which I picked up at the bargain price of £5.

John's dedication to the Amiga and the Deal Amiga group is quite extraordinary. As I mentioned earlier he came out of hospital less than three days ago and, although he was in some pain and occasionally had trouble talking , he had no intention of missing the technofair. He's been running the Deal Amiga Club for the past six years and has only ever missed two meetings. In the last six months he has increased the meetings from once a week to twice weekly.

Like many Amiga clubs, Deal has suffered quite heavily recently with many members migrating over to the PC. In an attempt to cater for these people, John started the Deal PC Zone. Initially Amiga and PC meetings were separate, however John now holds two meetings a week, on Monday and Friday, to allow as many people as possible to attend, be it PC or Amiga. Yearly membership to either club is free, however there is a £1 entrance fee to each meeting. As well as the usual club events, John offers a bring-and-buy service for any members looking to sell unwanted gear. Additionally John is an independent advisor for Dorling Kindsley which produces a wide range of educational software. Although not available for the Amiga, John is able to advise members which software is usable on the Amiga, either directly, or via emulation such as ShapeShifter.

Whilst the Deal Amiga Club might not be the biggest or most prominent Amiga User Group in the country it is certainly a testimony to one man's dedication. I would heartily recommend a visit to anyone in the neighbourhood. John's enthusiasm tends to rub off, and it's certainly given me incentive to go home and have a damn good tinker with my machine.

Chris Livermore

Where's the Microsoft logo?

Two of the younger members with their Amiga at a meeting.

HOW TO GET THERE

MEETING DETAILS: Monday and Friday 7pm – 11pm
St John's Ambulance Hall, Mill Hill, Deal, Kent (not Bank Holidays)
CONTACT: John Worthington 01304 367992 or email:
superhighwayman@hotmail.com
NEXT TECHNOFAIR: Kingsmead Leisure Centre, Canterbury. Sunday November 28th.

Alan Redhouse
Eyetech

Just the FAQs

They say that parents often influence their children's lives but Alan's son was using the family's Amiga first

How did you first get involved with the Amiga?

Well, it was a family thing really. When Will (my son) was nine he had out grown the Spectrum – so I asked the manager of our software section at work what to buy. He said the A500 so that was it. Later on we got an A600 with a massive 20MB hard drive instead. But apart from this I was just a casual observer. In my mind Amigas were still toys – we used 'proper' character-based UNIX boxes at work costing £15,000 a pop.

Then, around 1993, we were doing some consultancy at work for a transport company. Their big problem was how to get their salesmen to give consistent presentations on complicated issues. Then almost by accident I saw a multimedia demo running on Will's A600. This really was the business. How could Commodore hide all this capability away from the business world?

Unfortunately the A600 was not the right image for commercial presentations. Then along came the CD^{32}. Reboxed, it was ideal – so we set about getting some internal expertise, becoming a registered Commodore developer, building relationships with software tools suppliers (like Optonica) and gearing up to sell and support this new corporate presentation tool. Then Commodore went bust. As there was no way any major company was going to invest a significant amount of money in systems originating from a bankrupt company, so we went into the retail market as a holding operation to keep our expertise together whilst a buyer for Commodore was found. The rest, as they say, is history.

How did the EZTower come about?

There were a number of factors I suppose. Firstly, we had got to the stage where a lot of our customers had either got or wanted more hard drives, CD-ROMs, Zips, LS120s than could reasonably be accommodated on most people's desktops.

Secondly, Steve Jones had just released his Ethernet Siamese system, making it easy to network the Amiga and PC providing most of the functionality of a Zorro-expanded Amiga, at a fraction of the cost. However, most people, including ourselves , simply didn't have the spare real estate for two computers on our desktop. Two, in one box, under the desk was a much more attractive proposition.

And finally, one of our customers and your readers, Ian Aisbitt, came to ask us to sort out a home-brewed tower that someone – armed only with a large hammer and cold chisel – had tried to build for him.

The result was the EZTower – simple enough just to slot your Amiga in on its own, and flexible enough to add a networked PC motherboard within the same box. It has been a very successful product for us – particularly in its EZPC format. You may be forced to use a PC for business or educational reasons, but at least with an EZPC Tower you have an Amiga to use when the PC bit crashes.

The 19" rack-mounted Amiga made by Eyetech.

What are you working on at the moment?

The other side of the Eyetech business – which is involved with installing industrial data collection, tracking and control systems – has always required us to produce specialist interfaces and we are continuing to use this expertise on the Amiga side too. We brought A1200 users the first buffered interface back in 1996 and we've just introduced a keyboard activated monitor switch interface. Several more interface designs are currently in the pipeline.

We're also using the basic A1200 more and more in industrial and presentational applications. We manufacture a 19" rack housing for an A1200 motherboard (and accessories) and a diskless boot adaptor to allow you to run an A1200 from CD-ROM only. Both of these are finding extensive use in the information kiosk and entertainment/presentation sectors, and could be supplied to end users if there was sufficient interest.

What's the one peripheral which is indispensable?

An PCMCIA Ethernet card (with the CC_RESET fix of course) is the single most important device for integrating the Amiga with other business applications and other Amigas. We use lots of them.

Who is your Amiga hero?

What, apart from you Ben…?

We got seriously into this business just as Commodore were bowing out so I can't speak with any authority about Jay Miner and the other legends. However my hat goes off to all those individuals, far cleverer than I, who have continued to push the eight-year old design of the A1200 further than was every dreamed about when Commodore designed it. But the guy who has brought all this effort together into a coherent, well organised, accessible encyclopaedia is Urban Müller – compiler of Aminet. A true hero indeed.

What would you like to have invented?

The problem with inventions is before they've been invented you've no idea what they are, and afterwards they are usually too obvious for words. But what would I like to see developed that we do not have the time or skills to do ourselves is a record locking relational database.

What's the point in having a real-time multitasking computer if there's no means of different tasks being able to share data on a real-time basis? I'm sure its not difficult to implement for those who know what they're doing – the underlying OS supports it. Just get it in to *SBase IV* or *TWiST* someone – please!

afb amiga format bulletin

Rumours, witty remarks, Amiga help and news are just some of the reasons to join afb but if you want a second opinion…

When Ben Vost gave birth to the original amiga format bulletin, a monthly round-up of the features in the next issue of *AF*, nobody could have forseen what ramifications the yet-to-be-editor's actions would have.

For the first time in the history of *AF*, people could find out what was guaranteed to be in the next issue, rather than the vague promises that often appeared on the "Next Month" pages in the magazine, promises that, though no fault of the *AF* staff, could not always be kept. The afb allowed the staff (usually Ben) to apologise for missing features, and to sing the praises of new features and new products. And also, handily, allowed them to plug the new magazine. Hurrah!

However, for some people, this was not enough. They wanted to discuss the magazine, the Amiga, ISPs and the radiation poisoning of those who choose to holiday in Japan. So, the esteemed Mr Vost did not rest on his laurels (possibly because he has a nice comfortable chair instead, and chairs are far superior to laurels), and visited eGroups to create Son Of afb, the all-new afb.

In its early days, the afb was a quiet discussion board, sending and receiving a handful of emails each day, largely on-topic. As word of the new list spread, new members joined, bringing the list to today's bloated proportions of around eight hundred subscribers.

The afb remains, to this day, a mostly on-topic discussion of all that is relevant to the magazine and the computing world at large. Occasionally, this can become a little monotonous, so thankfully occasional off-topic posts arrive; it might be people talking about their love for cats, or members of afb splinter groups plugging their respective lists (afb Movie for film chat, and afb-OT for off-topic wibble).

Imagine the list as being like a block of flats, with the subscribers as the residents; In the penthouse you'll find Ben Vost, Richard "Evil" Drummond and Neil Bothwick chatting with authority on new developments. On the first floor, long term resident Matt Sealey will be getting crotchety with his new neighbours, insisting that he is right on any subject, and that everyone else is completely wrong, even if there is conclusive evidence to the contrary. Then there are the residents who keep themselves to themselves, checking their mailboxes for new mail daily, but choosing never to respond, through a lack of knowledge, time, or even shyness.

The afb, despite its size, still accepts new members with open arms; the more people who come in, the more opinions we get, and the better the discussions become. And don't worry if you can't afford to be online too much every day; the list only allows 200 posts to be made each day, which wouldn't take more than five minutes to download, staying within the minimum call charge.

Justify your email accounts, and sign up to the afb today. You won't regret it, and if you do, you can just as easily unsubscribe.

Daniel Thornton

Daniel Thornton of expressive, irreverent and comedic website "The Wibble" volunteered to give us his take on afb for this issue. You can find his website at http://www.thewibble.co.uk

RULES AND REGS:

Based on the fact that people complain about a lack of regulation on the list, we've decided to introduce some hard and fast rules. Expect these to change as time goes by, although some will stay fixed:

■ All polls must have dates. For an example of this, look at existing polls before starting one of your own. Also, unless absolutely necessary, choose a closed or anonymous poll – the named one takes up far too much space.

■ Make sure you quote sensibly, don't include the greeting or signature from the previous mail, etc.

■ Pay attention to and keep all mails with MANAGE at the start of the subject line.

■ Keep the subject live. Make sure that it applies to the mail you are sending, or change it to something more appropriate.

■ There are no content restrictions on afb, although swearing is frowned upon, but please don't include attachments unless previously agreed.

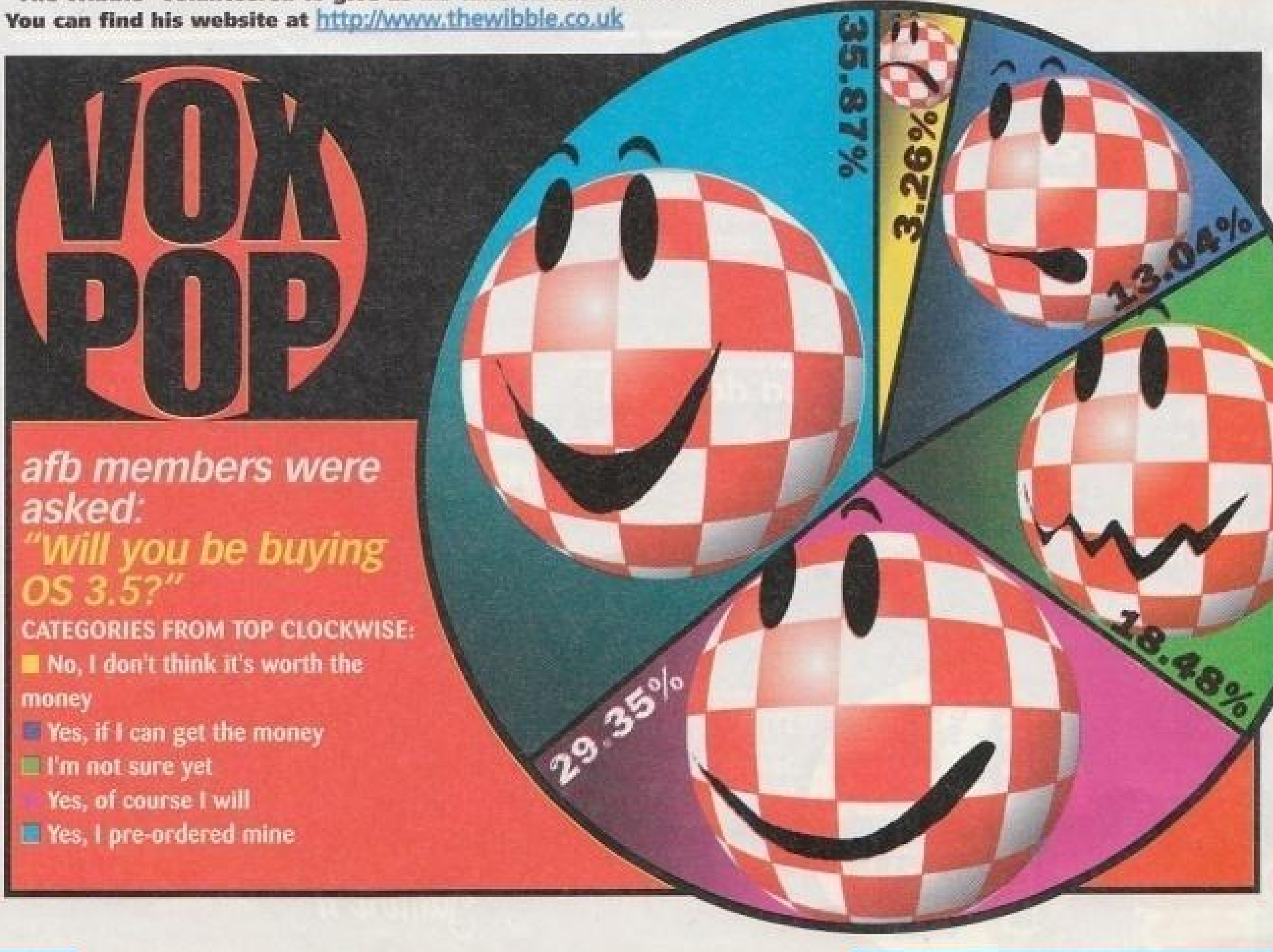
■ Any URLs posted should have the "http://" part to enable people to simply double-click on them to launch their browsers.

GETTING ON AFB:

You can subscribe to the afb by going to the following website and signing up:
http://www.egroups.com/group/afb/

If you just want news on when the next issue of *Amiga Format* will be out, we offer that at:
http://www.egroups.com/group/afb-announce/

It's worth joining both lists since they each offer unique things and the announce list usually only has one email every four weeks.



afb members were asked:
"Will you be buying OS 3.5?"

CATEGORIES FROM TOP CLOCKWISE:
■ No, I don't think it's worth the money
■ Yes, if I can get the money
■ I'm not sure yet
■ Yes, of course I will
■ Yes, I pre-ordered mine

FREE INTERNET FOR LIFE

Abel Gratis
Support:
Every day 09.00-23.00

100% UK Local Call Coverage
Software on the cover CD
Free software for Windows, Mac and Amiga Platforms

Sign up by going to:
http://www.abelgratis.co.uk

Tel: 0906 680 4444 Fax: 0906 557 4444
Email: sales@abelgratis.co.uk

Site of the Month:
http://www.isp-pdq.co.uk

SELECT SOFTWARE
ansaphone: 01709 530569

30,000+ titles & latest aminet
per disk 55p (branded 80p)

Pick 2 disks FREE for every 10
FREE catdisks
FREE post & pack
FREE disk boxes

Virus-Fre
- Easy t
Use Disk

BOXED GAMES • BUY 2 PICK 1 FREE • BUY 6 PICK 4 FREE • P&P £1 each (lowest priced choices are free, P&P still pa

Theme Park ECS/AGA/CD packs £4.90
Sim City 96% a must (any) £2.30
Pinball Illusions AGA £2.30
Slam Tilt Pinball AGA £2.90
Testament 92% Doom (A1200) £2.80
Death Mask Doom Clone (any) £1.90
Gloom Doom Clone 90% (A1200) £1.90
Gloom Deluxe 90% (020, 2 Meg) £2.80
Gulp (Like Lemmings) (any) £1.90
Marvin's Marv. Adventure (AGA) £1.90
J/ Pond 2 Robocod 93% (any) £1.90
Ruffian Platform (any) £1.90
Fantastic Dizzy Platform (any) £1.90
Snapperazzi Platform (any) £1.90
Rise of Robots ECS/AGA packs £2.90
Zeewolf 3D War Strategy (any) £1.80
Zeewolf 2 extended (any) £2.30 + P&P
Skeleton Krew AGA like A. Breed £1.90
Banshee AGA Shoot 'Em Up £2.30
RoadKill (Deadly Racing) A1200 £2.30
Classic Arcadia Nostalgia (any) £1.90
Heimdall 2 AGA RPG Game £2.90
Sci-Fi Collection mixed (any) £2.80
Base Jumpers multi-genre (any) £1.
Minskies Advanced Tetris (2 Meg) £
Deluxe Strip Poker (18+) (any) £2.20
International Golf (any) £1.90
Cosmic Spacehead varied (any) £1.

Mad Half Price Summer Sale with FUTURE PI
2.5" Hard Drives: 2.1Gig - £79 540Mb - £39
Prices include cables, workbench & £100+ software installed FREE. P&P - add £5

A1200/A4000
☐ X-Fighter AGA Street Fighter (3)
☐ Alien Formula 1 Racing AGA (1)
☐ Deluxe Pacman AGA Full Version!
☐ Rocketz 2.28 AGA
☐ Ampu Worms Clone (2)
☐ Ariel Racers Skidmarks (2)
☐ RD's Datatypes
☐ Iconian 2.98u AGA *Full* 80% version
☐ Deluxe Galaga AGA - Full version (2)
WB2+ UTILS
☐ Reorg3.11 & Disksalv 2
☐ Virus Checker II v2 or latest
☐ Powderdate Pro HD doubler
☐ MCP Latest (2) 93%
☐ Toolsdaemon 2.1a
MUI UTILS (WB2+)
☐ Tool Manager 3.1 Kit (2)
☐ MUI 3.8 and DevKit (2)
☐ RO Filemanager 1.29 84%
☐ Start Menu 2
☐ RD's MUI Utils 34
☐ MUI Video Titler 2.1
WB2+ GAMES
☐ Deluxe Pacman ECS Full Version
☐ Poing v6.02 (1)
☐ MegaTyphoon 91%
☐ Psycheual 98%
☐ Deluxe Galaga ECS - Full version!
UTILS ETC - ANY IMB
☐ TextEngine 5 Word Pro
☐ Snoopdos 3
☐ Wordworth Fonts (5)
☐ Star Printer Drivers
☐ Pro Printer Drivers
ART, MUSIC - ANY IMB
☐ Bars & Pipes Pro (1)
☐ Disney Colour Clipart (2)
☐ RD's Instrument Samples (2)
☐ Star Trek Rave Demo
☐ Personal Paint 6.4 *Full* (WB2+) (2)
☐ Octamed SoundStudio *Full* (WB2+) (2)
GAMES - ANY IMB
☐ Star Trek 6 Games Pack - £5!
☐ Lemmings Arcade Game (1)
☐ Sovereign Slots Fruit Machine (1)
☐ Super Foul Egg (Puyo)
☐ M&S Tetris Compilation
☐ Megaball v4 (3)
☐ Breed 96 SimCity 1.3
☐ Real Chinese Mahjong
☐ Coarse Fishing (2) 100%
☐ Antwars 1.9
☐ Chaneques (2)
☐ M.A.S.H.
EDUCATIONAL - ANY IMB
☐ Star Trek Guide (WB2+, hard driv
☐ Barney Goes Camping (2)
☐ New WB3 Beginner Guide
☐ Beginners Amigados (WB2+)
ICONS & BACKGROUNDS
☐ Magic WB 2.1 p (2) (WB2+)
☐ Newicons 4.1 (2) (WB2+) 90%
☐ Newicons Backdrops
☐ Magic WB Extras 12 (2)
☐ Magic WB Backgrounds (2)
☐ Star Trek Workbench Set - £4!
☐ Iconographics v3 (3)

• AMINET from 25p • 10 DISK THEMED PACKS £5 • CHEQUES PAYABLE TO: M.WOOD,
SELECT SOFTWARE, DEPT AFS, 12 RANWORTH ROAD, BRAMLEY, ROTHERHAM, S66 2SN

Gold Crest Pd

- Now better service and quality
- Games, Misc & Education, Games cheats
- Utilities, Business, Art programmes
- Animation, Clip Art, Slide Show, RPG, Tetris
- Adventure Games, Disk Mags, Demos
- Photos Transferred to Disk, Tools
- Literature, Books to Read, Music
- Music Util., Kids Progs, Klondike
- Custom made catalogues

Plus the cards and much, much more... 80p Per Disk
For a catalogue send an SAE and 3 floppy disks to:
28 Hepburn Gardens, Felling, Gateshead,
Tyne & Wear, NE10 0AD
or Tel/Fax: 0191 438 2939

0906 918 4283
I'm waiting for your call

Call anytime, day or night - Calls cost £1 per min.

Amiga **Bureau**
Just One Number!
HOTLINE **0906 553 1900**

Amiga Help Desk
Help & Advice on Anything Amiga
News & Information
All the latest Amiga News
Release Schedule
Week by week schedule
Fax Back Service
Catalogues, Lists, Buyer's Guide
Catalogue Requests
Request catalogues for most advertisers in this mag.
One phone call can get you most companies catalogues.
Calls cost £1 per minute
A £2 Software Voucher is sent with all catalogue requests.

PO Box 637 Swindon

SECOND HAND AMIGA CENTRE
MOBILE: 0797 191 0405
andy@shac15.freeserve.co.uk

A1200's FROM £79.99,
MONITORS FROM £71.00
EXTERNAL DISK DRIVES,
MEMORY EXPANSIONS,
PRINTERS, SCANNERS, ETC.
INCLUDES FREE MAINLAND DELIVERY

SEND S.A.E. FOR LATEST HARDWARE & SOFTWARE LIST TO:
SHAC, DEPT AF,
76 HILLRISE AVENUE, BINSTEAD, RYDE,
ISLE OF WIGHT PO33 3UL

HARDWARE ITEMS AND A1200 SETUPS PURCHASED
MAIL ORDER ONLY
Please make all cheques payable to A.I. Brown

CLASSIC AMIGA

11 Deansgate,
Radcliffe, Mancheste

PD Disks, Games, CD's, CD3
Hard Drives, Accelerators,
CD Drives, Modems and mor

Phone for a free catalogue di
0161 723 1638
www.classic22.freeserve.co.

PleXus Media

The New Choice for Great Value Amiga CD's

Only £10 each
Any 3 for just £20

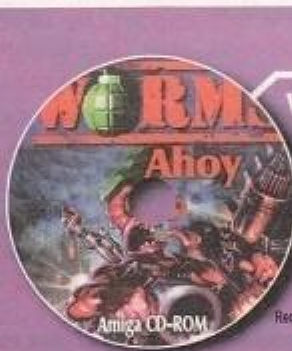
All the Info
It's easy to order...
Send your order with payment to:
PLEXUS MEDIA
PO BOX 583,
SWINDON,
SN2 2YB, UK

Call with your credit card details.
01793 33 02 33

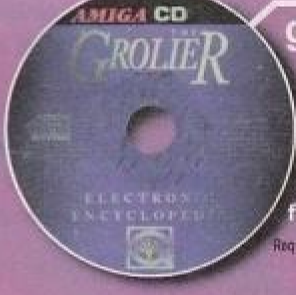
Postage in the UK:
Just add a total of £2.95
Overseas P&P: £7

DELTA VISA

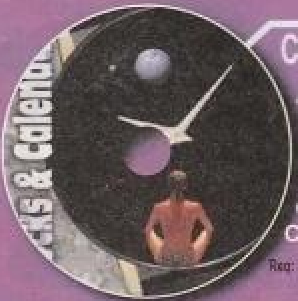
girls,girls,girls
A strictly adult's only CD featuring over 3000 high quality photographic images. Complete with easy to use viewer. *Over 18's Only.*
Req: AGA, 2mb ram + HD & CD-ROM



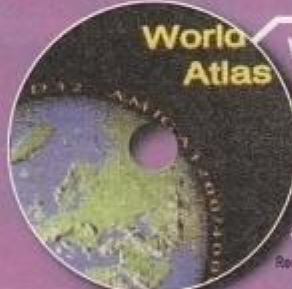
worms ahoy!
1000 extra levels, 100's of new sample sets & add-on's for Worms & Worms: The Director's Cut.
Req:2mb ram + HD & CD-ROM + Worms/Worms DC



grolier
The original interactive multimedia encyclopedia for th Amiga. Get it while you can! Suitable for all ages.
Req: AGA, 2mb ram + CD-ROM

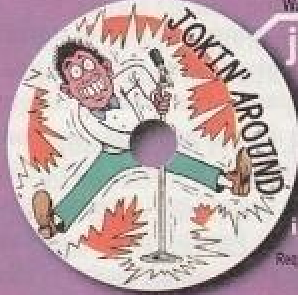


Clocks & Calendars
A truly unique CD featuring a multitude of time related software. Workbench desktop clocks, Calendars and a Diary.
Req: 2mb ram + HD & CD-ROM

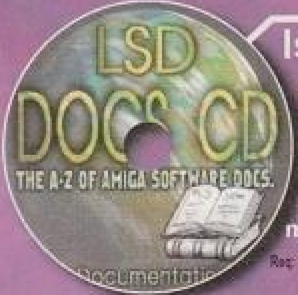


world atlas
A multimedia Atlas for the Amiga. Features hires maps of every country with full statistics and information.
Req: AGA, 2mb ram + HD & CD-ROM

Warning! Contains some adult mater

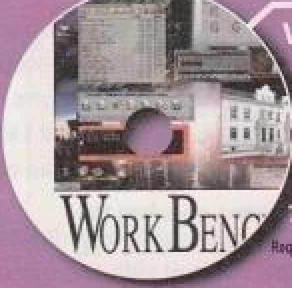


jokin' arounc
The most original CD in a long while. Features 3,000 hilar ious (well most of 'em) jokes all categorised into over 20 subjects
Req: 2mb ram + HD & CD-ROM



lsd docs cd
Includes over 3,000 documentation files for thousands of commercial games and applications, many with diagrams.
Req: 2mb ram + HD & CD-ROM

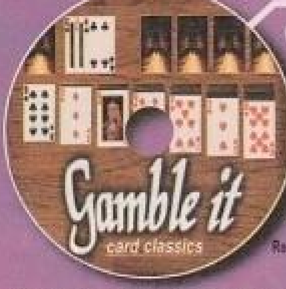
the ultimate!
Includes SIX CD titles... Street Racer, Ultimate Gloom 3, Ult. Theme Park, Skidmarks+, Cannon Fodder, Plus a bonus "mystery cd".
Req: AGA, 2mb ram + HD & CD-ROM



wb add-on's
A professional collection of Workbench 3 patches, tools, commodities and add-on's. *The true WB Enhance*
Req: AGA, 4mb ram + HD & CD-ROM

C 64
Spectrum
MSX
Amstrad
BBC
IBM
apple
UNIX
Sinclair QL
emulate it

emulate it!
Use software from the Commodore 64, Spectrum, Amstrad, QL, BBC Micro, +4, C16, PC, Atari & Mac on your Amiga setup.
Req: AGA, 4mb ram + HD & CD-ROM



card classics
Contains Solitaire, Rummy, Poker, Craps, Blackjack, Bridge, Cribbage, Klondike, Pontoon and more.
Req: 2mb ram + HD & CD-ROM

Amiga Arcade

amiga arcade
Includes full versions of Space Invaders, Galaxians, Breakout & Pacman as well and many other classic games.

stock at all times. Mail Order only. We Guarantee that all titles advertised here ar

AF 131 – XMAS 1999

Editor: Ben Vost
Production Editor: Clare Hatfield
Art Editor: Colin Nightingale
Staff Writer: Richard Drummond
Contributors: Simon Goodwin, Dave Cusick, Tony Horgan, Errol Madoo, Nick Veitch, Paul Cavanagh, Neil Bothwick, Chris Livermore
CD Compilers: EMComputergraphic 01255 431389
Assistant Publisher: Paul Pettengale
Group Publisher: Jon Bickley

Overseas Licensing enquiries: Chris Power Fax: +44 (0) 1225 446019, chris.power@futurenet.co.uk
Group ad manager: Simon Moss
Ad Manager: Simon Williams
Senior Sales Executive: Adam Portingale
Marketing: Georgina Sanders
Production Manager: Charlotte Brock
Production Co-ordinator: Emily Moss
Print Services: Rebecca Stables
Ad Design Supervisor: Sarah Orchard
Ad Designer: Sheu-Kuie Ho
Group Production Assistant: Lorraine Ford
Colour Scanning & Imagesetting: Jon Moore, Mark Gover, Matthew Rogers, Jason Hudson
Circulation: Jason Comber (Intl.), Regina Erak(UK).
Colour Originators: Phoenix Repro
Printed in the UK by GSM and Southern Print.

AMIGA FORMAT – CONTACTS
30 Monmouth St, Bath, Somerset BA1 2BW
Telephone 01225 442244
Subscriptions (see p.12) 01458 271102
Customer Services 01225 822510
Website: http://www.amigaformat.co.uk
Email: amformat@futurenet.co.uk
(INCLUDE DEPARTMENT IN SUBJECT TEXT OR YOUR MAIL WILL NOT BE READ)

If you have a feature idea, a review, a reader request or you want to be in the Amiga Angels list, send an email to ben.vost@futurenet.co.uk, with "Features", "Reader Review", "Reader Request" or "Amiga Angels" in the subject line accordingly. If you don't have email, a letter to the *AF* address with headings is also fine.

If you want to speak to us about a technical problem, we have a reader call day on Tuesdays. Call us on (01225) 442244 (10am–1pm,2pm–5pm).

Future Publishing Ltd is part of The Future Network plc which hasoffices in Bath, London, Milan, Munich, New York, Paris and San Francisco

AF'S REVIEW POLICY

...is very simple. ***Amiga Format*** is written by the most experienced Amiga users in the world and what we say goes. OK?

WHAT OUR REVIEW SCORES MEAN

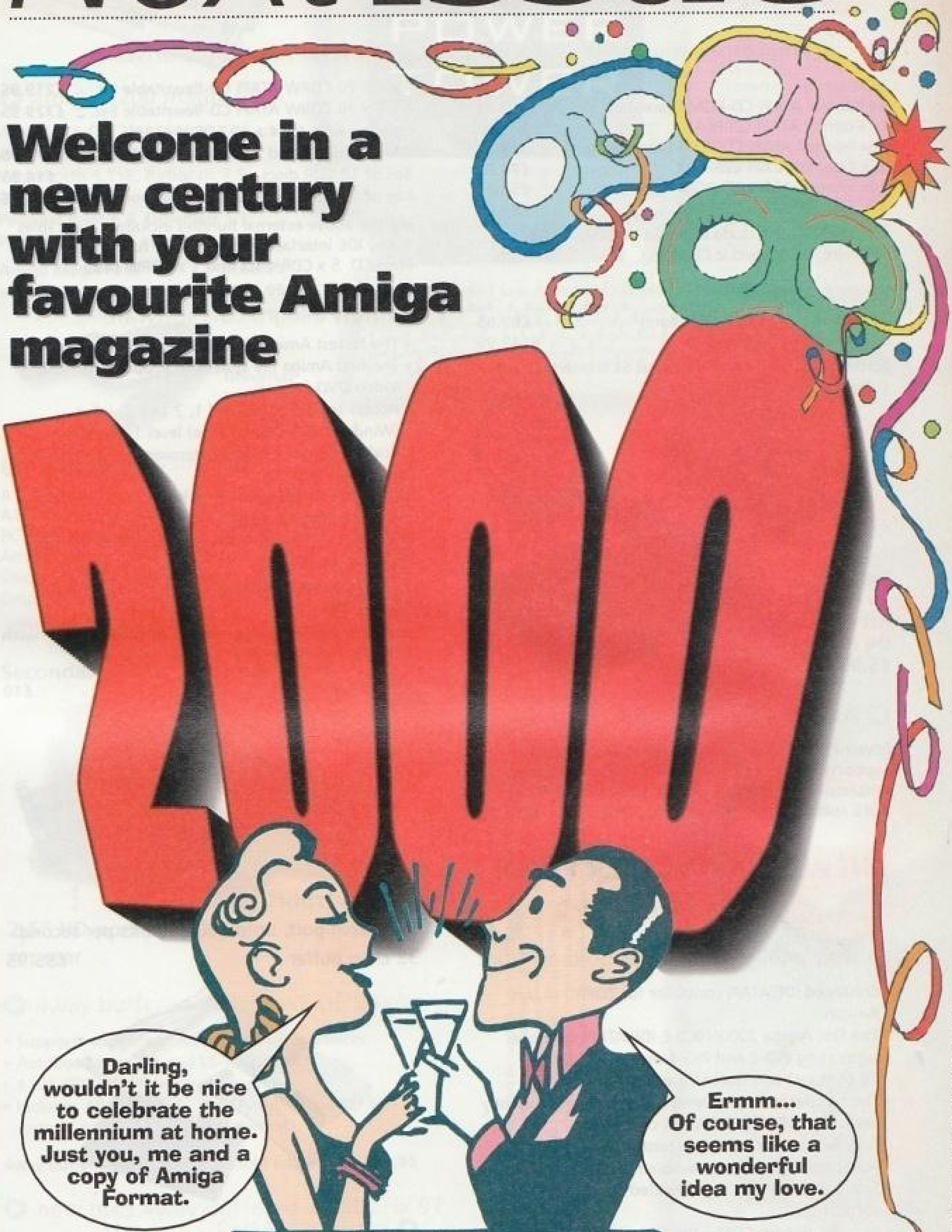
90+%	These products are absolutely top notch. They are hard to find any fault with and that's the reason they get an *AF Gold* award.
80-89%	These are excellent products that could be improved ever so slightly. They are well worth your cash.
70-79%	A very good product with a few flaws. Items that get a score in this range are still good, but need work.
60-69%	Above average products which need improvement to get a better score.
50-59%	Average products get average scores.
40-49%	Below average and needs a fair bit of work to make it worthwhile.
30-39%	Needs a lot of work for a good score.
20-29%	Something fatally wrong.
Under 20%	The absolute pits.

All contributions submitted to *Amiga Format* are accepted on the basis of a non-exclusive worldwide license to publish or license others to do so unless otherwise agreed in advance in writing. © Future Publishing Limited 1999.

ABC **Member of the Audit Bureau of Circulations. Registered Circulation** **13,264** January–June 1999

Next Issue

Welcome in a new century with your favourite Amiga magazine


2000
Darling, wouldn't it be nice to celebrate the millennium at home. Just you, me and a copy of Amiga Format.
Ermm... Of course, that seems like a wonderful idea my love.

January issue on sale Monday December 13th 1999

RESERVE OR DELIVER YOUR COPY TODAY!

Tell your local newsagent to reserve or deliver AMIGA FORMAT on a regular basis.

MAGAZINE MONTH

TROUBLE LOCATING AMIGA FORMAT?

It is possible to reserve a copy of *Amiga Format* at almost all newsagents, including branches of John Menzies or WHSmith. Simply fill in the form here and hand it to your newsagent – it's easy and there's no obligation. If you still have trouble, phone 01225 442244 and ask for the Circulation Dept, who should be able to inform you of a stockist in your area.

Please reserve me a copy of AMIGA FORMAT every month
Name: ....
Address: ....
....
....

The contents of future issues may be subject to change – no guarantee is implied or intended.

The images used herein were obtained from IMSI's MasterClips Collection, 1895 Francisco Blvd. East, San Rafael, CA 94901-5506, USA

cd-rom, cd-recordable & rewritable

EIDE cd-rom drives

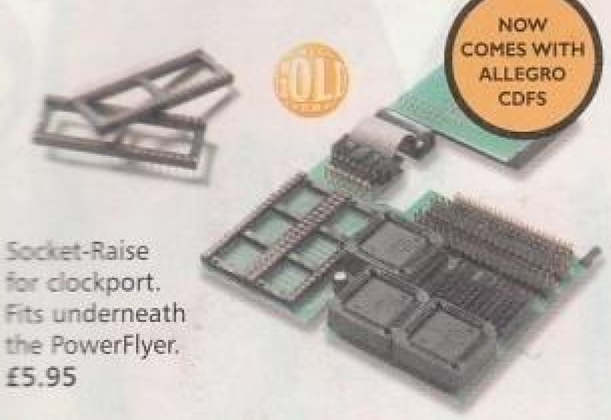
6x Internal ATAPI CD-ROM (bare unit)	£29.95
6x External ATAPI CD-ROM	£65.95
36x Internal ATAPI CD-ROM (bare unit)	£45.95
36x External ATAPI CD-ROM	£79.95
40x Internal ATAPI CD-ROM (bare unit)	£54.95
40x External ATAPI CD-ROM	£89.95

(External drives include Buffered Interface, EIDE '99 software, cables and 2 CD titles)

SCSI cd-rom drives

32x Internal SCSI CD-ROM (bare)	£89.95
32x External SCSI CD-ROM	£149.95

(External includes cables, Squirrel SCSI interface with software and 2 CD titles)



Socket-Raise for clockport. Fits underneath the PowerFlyer. £5.95

A1200 powerflyer gold edition

Power-Flyer, 4-way enhanced IDE/ATAPI controller, Supports the latest PIO-3 and PIO-4 faster modes, Autoboot from Zip and LS-120, UDMA - 11MB/sec CDFS software, PowerFlyer Gold Edition £54.95

NEW A4000 POWER FLYER GOLD EDITION

new a4000 powerflyer gold edition

- Enhanced IDE/ATAPI controller for ZORRO III bus Amigas
- The first Amiga 3000/4000 E-IDE/ATAPI controller supporting PIO-3 and PIO-4 modes (for up to 16.6MB/sec) and faster UltraUDMA modes
- The transfer is several times faster than any currently available ZORRO II IDE/ATAPI controller
- Fully autoconfig ZORRO III card
- Autoboot from any removable media (ZIP, LS120)
- FastATA'99 - Highly sophisticated supporting software
- Includes Allegro CDFS - the fastest Amiga CD file system, supports video DVD format

On the A4000 two devices canbe attached to a standard IDE controller, and another four to the A4000 Power Flyer. More than one A4000 Power Flyer can be installed at the time. After it has been switched on, the Amiga can boot from any of the Hard Drives connected, either to the Power Flyer or to the Standard IDE controller.

A4000 PowerFlyer Gold Edition	£79.95

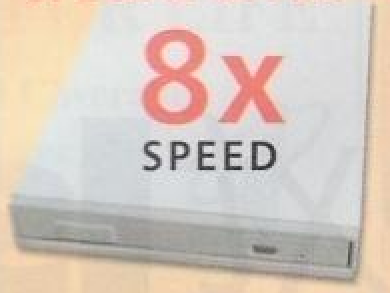
buddha flash

For all Zorro bus Amigas Zorro IDE controller, upto 4 IDE/ATAPI devices, supports LS120, Zip, Syquest and any removable media. Includes special version of IDEfix97. A1200 clock port £49.95

new image fx and aladdin

£29.95

SPECIAL OFFER - ONLY £69.95



The new UltraSlim ATAPI CD-ROM drive, complete with 4 way buffered interface and EIDE '99, Allegro CDFS, PSU, Audio In /Out and cables.

new cd-rewritable drives

4 x 4 x 20 CDRW ATAPI CD-Rewritable Int.	£219.95
4 x 4 x 20 CDRW ATAPI CD-Rewritable Ext.	£329.95
TwinBox with 4 x 4 x 20 CDRW ATAPI CD-Recordable and 3.2GB IDE Hard Drive	£479.95
Box of 10 CDR discs	£14.95
Box of 5 CDRW discs	£39.95

(All the above external bundles include: case, cables. 4-way IDE interface with IDEfix 97 fully registered, MakeCD, 5 x CDR discs and 1 x CDRW Disc)

new allegro cdfs software

- The fastest Amiga CD File System.
- The first Amiga file system to support UDF (the Video DVD format).
- Access to: ISO 9660 level 1, 2 and 3, Joliet (Windows95/98 long name) level 1, 2 and 3 RockRidge (with Amiga Extensions), CDDA, UDF (Video DVD)
- Supports Amiga protection bits
- Supports Multisession
- Supports SCSI and ATAPI devices (CD-ROM, CD-R, CD-RW, DVD)
- Supports direct audio grabbing from standard audio CDs

For non-gold edition users Allegro works with EIDE'99 and Powerflyer - available soon

Allegro CDFS only	£10

powerport junior

Fast Serial port, upto 460,800 bits per second 32 char. buffer £35.95

catweasel Mk 2

A4000/A1200 advanced floppy drive controller, can use most PC floppy drives £49.95

kylwalda - bootadaptor

To use PC floppy drive as replacement of DF0	£19.95
PC Floppy Disk Drive	£20.00

sundries

Amiga 400DPI Mouse & Mat	£9.95
Boing Mouse & Round Mouse Mat	£9.95
Boing Mouse Mat only	£4.95
CD32 Joypad	£9.95
New 4 way joystick adaptor	£8.95
Original A1200 replacement keyboard (int.)	£14.95
Original A1200 replacement power supply	£9.95

new scala mm400

Multimedia presentation software £55.95

amazing hard drive deals

2.5" 6.
£209
Hard D

Plug and play hard drive. Includes cable and is already partitioned. All HD's come with a 2yr warranty*

2.5" hard drives

2.5" **160MB** IDE including IDE cable	£4
2.5" **810MB** IDE including IDE cable	£6
2.5" **3.2GB*** IDE including IDE cable	£1
2.5" **4.8GB*** IDE including IDE cable	£1
2.5" **6.4GB*** IDE including IDE cable	£2
2.5" **10GB*** IDE including IDE cable	£3

3.5" hard drives

3.5" **3.2GB*** IDE including IDE cable and install disk	£9
3.5" **8.4GB*** IDE including IDE cable and install disk	£1
3.5" **13GB*** IDE including IDE cable and install disk	£1

Hard drives bigger than 4GB are supported auto cally by the PowerFlyer or by IDEfix 97 using the patch provided (an updated FileSystem is availab on www.amiga.de). Please note that cables inclu with 3.5" HD have standard 40pin headers. If yo need to connect a 3.5" HD directly to the A1200 motherboard, you will need a 44 high density (2.5") to 40 standard (3.5") IDE 'stack cable' £1

new 250MB zip

iomega zip

Zip 100MB external SCSI including Amiga Zip too & cable (requires Squirrel or any SCSI interface)	£1
Zip 100MB internal ATAPI including 4 way buffered int., EIDE 99 software, IDE cable and 1 cartridge	£9
Zip 100MB internal ATAPI (bare unit only)	£7
Zip cartridge (100MB)	£1
NEW Zip 250MB External SCSI inc. cartridge	£18
NEW Zip cartridge (250MB)	£1

LS120 drive

LS120 120MB Internal ATAPI including 4 way buffered i/f, EIDE 99 software, IDE cable and 1cartridge	£8
LS120 120MB Internal ATAPI (bare unit only)	£6
LS120 120MB External ATAPI including 4 way buffered i/f, EIDE 99 software, IDE cable and 1 cartridge	£13
LS120 cartridge	£

floppy drives

A500/A600/A1200 Internal Drive	£3
A2000 Internal Drive	£3
PC Floppy Disk Drive	£2
PC880E External for all Amiga models	£3
XL 1.76MB External for all Amiga models	£6
XL 1.76MB Internal for A4000	£6

scsi controller - squirrel interface

a1200 power tower

ower Tower Bare £119.95

ower Tower 1
ower Tower plus A1200 motherboard, mouse, C keyboard and FDD £319.95

ower Tower 2
ower Tower, A1200 motherboard, mouse, C keyboard, Typhoon Lite 68030, 8MB of RAM, .2GB Hard Disk, 4-way IDE buffered interface, IDE 99 software and FDD £499.95

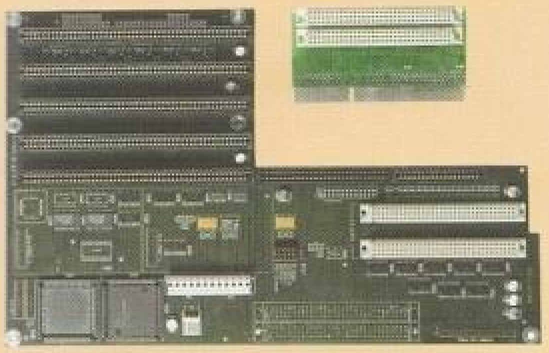
ower Tower 3
ower Tower, A1200 motherboard, mouse, PC eyboard, Typhoon Lite 68030, 16MB of RAM, 2x CD-ROM, 3.2GB Hard Disk, 4-Way IDE uffered interface, EIDE 99 and FDD £579.95

ower Tower 4
ower Tower plus A1200 motherboard, mouse, PC eyboard, FDD, 68030 40MHz, 40MHz FPU, 32MB of AM, 32x IDE CD-ROM drive, internal ATAPI 100MB ip drive and 1 cartridge, 3.2GB Hard Disk, internal can Doubler inc. Flicker Fixer, 15" SVGA monitor, -Way IDE buffered interface inc. EIDE 99 and xternal audio port with speakers £899.95

new a4000 power tower

ew tower case for the A4000 includes: 7-slot Zorro /III bus board, 2 video slots, 5 PC-ISA slots, 230 watt SU, 3 x 5.25" external bays, 2 x 3.5" external bays nd 6 x 3.5" internal bays £189.95

New Z4 and bundles!



the new A1200 tower Z4 board

Z4 the ultimate bus board for Zorro II boards, inc: Five Zorro II slots • One video slot aligned with the first Zorro slot for all major graphics cards • Option Video slot enabler for users of card with scan doubler or flick fixer • Four A1200 style clock ports • Connector for rest cable • Jumpers to activate double speed transfers on the first two slots • Floppy drive power lead connector for CVPPC users • Two extra fast Z4 slots for future ultra fast cards • Pass through and compatibility jumpers for all major accelerator cards.

The Z4 board (for A1200 Power Tower)	£125.95
Video Slot Enabler	£24.95
Z4 inc. Apollo 68040 28MHz accelerator	£199.95
Z4 inc. Blizzard 1240 40MHz accelerator	£239.95
Twister Mk2 Fast Serial Interface	£24.95

power tower accessories

o many accessories to list - please call for you equirements

ower SCSI adaptor, internal to external SCSI daptor (external DB-25 pin female connector, ternal 50 pin header, internal DB-25 pin male onnector £19.95

new amiga 1200 motherboards

1200 motherboard with ROMs £125.95

For more technical details checkout our web-site - A4000 Tower now available!

amiga 1200 magic pack

Amiga, 3.1 OS, 2MB, 68020 CPU and AGA chipset. Sofware includes: Wordworth 4.5SE, Turbocalc 3.5, Datastore 1.1, Photogenic 1.2SE, Personal Paint 6.4, Organiser 1.1, Pinball Mania and Whizz

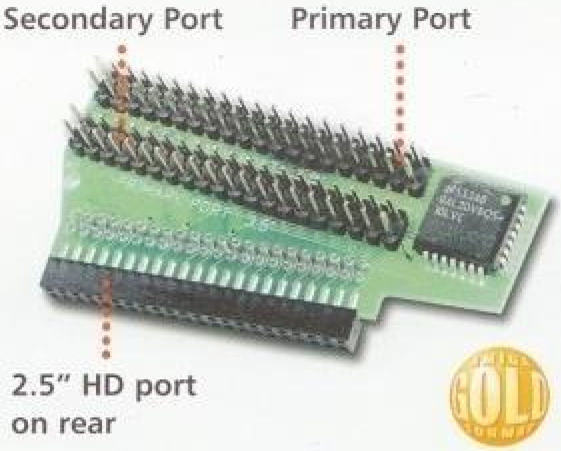
Amiga Magic Pack	£169.95
as above plus 160MB HD	£199.95

Universal PC/Amiga interface

keyboards & interfaces

A1200 desktop universal keyboard int.	£19.95
A1200 tower universal keyboard int.	£19.95
PC Keyboard interface only (A1200)	£19.95
Amiga Keyboard interface only (A1200)	£19.95
Original A4000 keyboard only*	£39.95
Original PC keyboard only*	£14.95

*requires keyboard interface



4way buffered interface/EIDE'99 s/w

- Supports all IDE and ATAPI removable devices
- Autoboot from Zip and LS-120 drives
- 4 IDE/EIDE/ATAPI devices support
- Includes Allegro CDFS - the fastest Amiga CD file system, supports video DVD format

4way buffered Int. & EIDE'99 Gold Edition £29.95

new mk3 4way buffered int./IDEFix 97

- Includes cable to connect to the motherboard
- Supports all IDE and ATAPI removable devices
- Autoboot from ZIP and LS-120
- Includes CacheCD file system

MK3 4way buffered Int. & IDEFix 97 software £19.95

POWER TOWER

PHONE ORDERS We accept most major credit cards and are happy to help you with any queries. **CHEQUES/POSTAL ORDERS** Ordering by cheque/PO please make payable to POWER COMPUTING LTD and specify which delivery is required. **WARRANTY** All Power products come with a 12 month warranty unless otherwise specified. **TECHNICAL SUPPORT** Help is on hand with a full Technical Backup service which is provided for Power customers. **MAIL ORDER PRICES** All prices listed are for the month of publication only, call to confirm prices before ordering. **EXPORT ORDERS** Most items are available at Tax Free Prices to non-EC residents. Call to confirm prices. **BFPO** orders welcome. **MAIL ORDER TERMS** All prices include VAT. Specifications and prices are subject to change without notice. All trademarks are acknowledged. All orders in writing or by telephone will be accepted only subject to our terms and conditions of trade, copies of which are available on request. Please allow up to 7 days for cheques to clear before dispatching of the goods.

tel 01234 851500 fax 01234 855400
nternet www.powerc.com email sales@powerc.demon.co.uk
Jnit 82a, Singer Way, Woburn Road Ind Estate, Kempston MK42 7PU
elivery 2-3 days £5 next day £8 saturday £15 northern ireland £15 monitor/tower £8 (u.k. mainland only)

SPECIAL OFFERS WHILST STOCKS LAST

EXTERNAL SCSI HARD DRIVES
WITH POWER SUPPLY

540 MB	£39.95
1.08 GIG	£59.95
4.3 GIG	£149.95

14" COLOUR AMIGA MONITORS
WITH SWIVEL STANDS
£69.95

CD32
WITH POWER SUPPLY **£79.95**

CD32+SX32 Pro
including 030 accelerator + 8mb RAM
£149.95

TRACK BALLS ONLY £19.95

NEW **Z4 BOARD**
FROM APOLLO
£124.95

AMIGA SALES & REPAIRS WHILE-U-WAIT!!

The only Amiga repair centre in the UK recommended by Amiga International

ALL REPAIR PRICES INCLUDE LABOUR, PARTS & VAT • 3 MONTHS PARTS & LABOUR WARRANTY • 24 HOUR TURN AROUND ON MOST COMPUTERS INCLUDES **FULL DIAGNOSTIC, SERVICE & SOAK** • UPGRADES FITTED FREE WITH REPAIR • £10.00 EXTRA CHARGE FOR WHILE-U-WAIT SERVICE • PICK UP & DELIVERY SERVICE AVAILABLE

MONITORS

14" DIGITAL SVGA	£89.00
15" DIGITAL SVGA	£119.95
17" DIGITAL SVGA	£189.95

3 YEARS ON SITE WARRANTY

SCANNERS

UMAX FLATBED SCANNER plus SOFTWARE
£149.95

FIXED REPAIR CHARGES

inc. all parts, labour & VAT

A500, A500+ A600	A1200	A1500, A2000 A4000
£39.95	£49.95	Quotation

APOLLO ACCELERATORS

1230/40	£59.95
1240/28	£119.95
1240/40	£179.95
1260/50	£259.95
1260/66	£POA

SCANDOUBLER

Internal	£49.95
External	£49.95

FLICKER FIXER

Internal	£79.95
External	£79.95

ProGrab 24 £99.95

MEMORY UPGRADES

A500 TO 1MB	£13.95
A1200.... 8MB	£39.95
A1200.....4MB	£34.95
A500+ TO 2MB	£19.95
A600 TO 2MB	£19.95

(Upgradeable to 8MB)

SIMMS MEMORY

4MB	£9.95
8MB	£14.95
16MB	£29.95
32MB	£49.95
64MB	£POA

Discount available when bought with accelerators

INTERNAL FLOPPY DRIVES

A500 / A500+ / A600 / A1200 / A2000 ..£24.95
These drives work as High Density in A1200

IDE FIX, BUDDHA & CATWEASEL

4 Way Buffered Interface +IDE Fix	£29.00
Buddha Flash IDE Controller	£49.00
Catweasel Mk 2	£49.00

PICASSO

Hi Res Graphic Card....£249.00

NEW GENLOCK

for all Amigas £69.95

INTERNAL CD-ROM DRIVES

INTERNAL 44X IDE	£49.95
INTERNAL 4XSCSI	£49.95

INTERNAL & EXTERNAL CD-ROM RE-WRITEABLE DRIVES

Please ring for latest prices

EXTERNAL SCSI CD-ROM DRIVES including Squirrel

4xSCSI CD-ROM	£99.95
4XSCSI + 1Gig SCSI HDD	£189.95
4xSCSI + 520MB SCSI HDD	£169.95
4XSCSI + 4.3Gig SCSI HDD	£249.95

External SCSI CD-ROMs + SCSI Hard Disk Drives come in one award winning case

PC Keyboard Adaptor **£14.95**

AMIGA COMPUTERS & TOWER CASES for A1200 & A4000

A1200 + 120Mb HD	£179.95
A1200 + 340Mb HD	£199.95
A1200 + 720Mb HD	£239.95
A1200 + 810Mb HD	£249.95
TOWER + Mouse + PC Keyboard	£129.95
TOWER + A1200 Motherboard + Mouse + PC Keyboard + FDD + 4.3Gig Hard Drive	£399.95
TOWER as above + Typhoon Accelerator 68030/40 with 8Mb + Buffered Interface + IDE Fix	£499.95

PLEASE CALL FOR OTHER 2.5" & 3.5" HDD CONFIGURATIONS

(Please add extra £49.95 to include 44x IDE CD-ROM Drive)
RBM A4000 Towers available from stock.
A2000 and A4000 computers in stock now.

FREE FITTING
into Tower all items bought from Analogic

A1200 Motherboards

without ROMS	£99.00
with ROMS	£125.00

Amiga 3.1 Operating System

3.1 ROMs for A1200	£24.95
3.1 ROMs + Disks + Manuals for A1200	£39.95
3.1 ROMs for A4000	£29.95

A1200 HEAVY DUTY

Power Supply........£39.95

HARD DRIVES

2.5" IDE

120Mb	£44.95
340Mb	£54.95
720Mb	£64.95
810Mb	£69.00
1.1Gig	£99.95
1.8Gig	£114.95
2.1Gig	£119.95
3.2Gig	£129.95
4.1Gig	£149.95
6.4 Gig	£199.95
10.0 Gig	£299.95

3.5" IDE

2.5Gig	£99.95
4.3Gig	£99.95
8.4Gig	£149.95
13 Gig	£189.95

3.5" SCSI

540MB	£39.95
1.08Gig	£59.95
4.3Gig	£149.95

All Hard drives are pre-formatted, partitioned with Workbench loaded.
All 2.5" hard drive prices include cable, software & screws for fitting.
2.5" IDE Cable & software if bought separately ...£9.95
3.5" IDE Cable & software ...£12.00
Please add £40.00 if any 3.5" hard drive is required in external case.

GUARANTEED SAME DAY DESPATCH

Subject to availability **Please call for any Amiga Hardware not listed in this ad**

NEW

Amiga OS 3.5 upgrade	£34.95
ROM 3.1 + OS 3.5 upgrade	£54.50

ZIP DRIVES

External SCSI Zip Drive (software & cable included)	£139.95
Internal ATARI Zip Drive + IDE Ax	£99.95
Internal ATARI Zip Drive	£69.95
External 250 mb SCSI Zip Drive	£189.95
Zip Cartridge 100 mb	£12.95
Zip Cartiridge 250 mb	£19.95

TRADE IN YOUR AMIGA FOR A PC

Low price PCs available for Internet/Email
WE BUY DEAD OR ALIVE A1200, A2000, A3000, A4000
Ring us for a reasonable offer for your A1200/A4000 computer (or just motherboard) – in any condition

56.6K Fax/Voice MODEM

Including all cables plus ibrowse software, Net & Web plus one month free with Demon
£69.95

CHIPS • SPARES • ACCESSORIES (Please ring for chips/spares/accessories not listed here)

ROM 2.05	£19.00
A500/A500+ Keyboards	£19.95
A600/A1200 Keyboards	£19.95
A500/A600/A1200 Power Supply	£24.95
A520 Replacement Modulator	£19.95
PCMCIA V Adaptor	£19.95
Amiga Mouse + Mat	£14.95
Amiga SCART Lead	£14.95
Parallel Printer Lead	£9.95
A1500/A4000 PSU	£POA
50 pin male to male Centronic Lead	£14.95
50 pin female to male Centronic Lead	£14.95
Amiga Monitor Leads	£14.95
Sqirrel Interface	£39.95
Surf Squirrel	£89.95
PC Keyboard	£14.95
Original A4000 Keyboard	£39.95
80 watt Speaker	£19.95
200 watt Speaker	£34.95
Standard 3 Way IDE Cable	£4.95

COMPONENT SPARES: We are the largest distributor and retailer of Amiga spares in the UK

ANALOGIC
ANALOGIC
ANALOGIC

Analogic Computers (UK) Ltd
Unit 8, Ashway Centre, Elm Crescent,
Kingston-upon-Thames, Surrey KT2 6HH

Open Mon-Fri 8.00am-5.30pm, Sat 9.00am-5.00pm
Fax: 0181 541 4671 email: Sales@analogic.co.uk
Tel: 0181 546 9575

Ample Parking

★ All prices include VAT ★ All prices & specifications subject to change without notice ★ Fixed charge for repair does not include disk drive/keyboard
★ We reserve the right to refuse any repair ★ P&P charges £3.50 by Royal Mail or £7.05 for courier ★ Please allow 5 working days for cheque clearance
only as per our terms and conditions, copy available on request.★ Please

VISA